

# I

## Test Suite Overview

## Test Suite Structure

**Suite Name** : V51DLL

**Standards Ref** : ETS 300 324-1 including amendment A1 [1]

**PICS Ref** : ETS 300 324-2

**PIXIT Ref** :

**Test Method(s)** : Remote test method applying the Embedded variant of the Remote test method.

**Comments** : ETS 300 324-8: ATS for V5.1 DLL layer testing at the Access Network (AN) side as well as at the Local Exchange (LE) side.

Version: 06

Date: 01.09.1999

This ATS is based on ETS 300 324-1 including amendment A1 [1] and aligns with the principles in the ISO/IEC 9646-3.

The ATS contains test cases based on the test purposes described in the ETS 300 324-7 [7]. The tests cover the testing of the sublayers of the DLL, i.e. LAPV5-DL, LAPV5-EF and the mapping function (refer to figure 6, ETS 300 324-1 [1] which illustrates this approach). Regarding the conformance testing these sublayer functions are not tested separately. The implemented test cases cover testing of the LAPV5-DL (Control protocol only), LAPV5-EF and the mapping function.

The AN frame relay function is tested in co-operation with a generic test of an ISDN D-channel. The limitation of the DLL test to the Control DL is based on the assumption that the PSTN DL implementation is identical with the Control DL implementation. This shall be declared by the IUT supplier. Otherwise the test cases defined for the Control DL have to be adapted and extended for the PSTN DL.

The test purposes of the ETS 300 324-7 [7] which were not implemented are listed in the Clause 5.

The ATS conventions applied for the development of this ATS are defined in Clause 6. These ATS conventions will help to understand the structure and TP implementation in this ATS. For any later maintenance or further development of this ATS these ATS conventions shall be considered to avoid any inconsistency.

Required information about the V5.1 IUT (AN and LE):

In order to perform the test scheduls, the equipment supplier shall provide for the IUT information regarding the implementation of the protocol within the AN or LE, i.e. the PICS (ETS 300 324-2 [2]) and information regarding the configuration of the IUT, i.e. the PIXIT (Annex B).

Required data configuration of the V5.1 IUT (AN and LE):

To test the DLL entity of the AN as well as of the LE a particular IUT data configuration is assumed to avoid complicated test case layout. Depending on the services supported by the IUT, three IUT data configurations are considered:

- ISDN user ports supported (ETS 300 324-2 [2], index M.1)
- PSTN ports supported (ETS 300 324-2 [2], index M.2)
- ISDN user ports and PSTN ports supported

Port provisioning:

- If ISDN applications are provisioned, one ISDN user port shall be provisioned in such a way that the ISDN user port entity will not send an unblock command when it is in operational state. The ISDN port shall be provisioned for a non-automatic ISDN terminal for point to point connection over a single data link.

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Test Suite Structure			
<p><b>Comments</b> : ...</p> <ul style="list-style-type: none"> <li>– If PSTN applications are provisioned, only one PSTN port shall be provisioned.</li> </ul> <p>Additional requirements:</p> <ul style="list-style-type: none"> <li>– For AN testing a non-automatic ISDN terminal (SAPI=0, TEI=0) shall be connected to the ISDN user port.</li> </ul> <p>In case other configurations are provisioned, the start-up procedure has to be adapted. Further it might be possible that events occur which are not considered in this ATS.</p>			
Test Group Reference	Selection Ref	Test Group Objective	Page Nr
LAPV5_EF/	ISDN_PORT_PROV	Regarding ETS 300 324-1 [1], figure 6, the defined test cases cover the LAPV5-EF procedures including the mapping function and the AN relay function.	
LAPV5_EF/IT/		Basic inter connection tests. The IT test sub group contains a basic set of test purposes which assures that there is a sufficient conformance for interconnection and that the chosen parameters are valid for the configuration.	
LAPV5_EF/BV/		Valid behaviour tests. A valid test is a test where the message sequence and the message contents is considered as valid (no MDL-Error shall be indicated).	
LAPV5_EF/BI/		Invalid behaviour test. Invalid protocol events is the receipt of a syntactically invalid PDU, thus a MDL_ERR_IND might be caused in the FSM of the Data Link Layer entity.	
LAPV5_DL/		Regarding ETS 300 324-1 [1], figure 6, the defined test cases cover the LAPV5-DL (Control protocol only) procedures.	
LAPV5_DL/IT/		Basic inter connection tests. The IT test sub group contains a basic set of test purposes which assures that there is a sufficient conformance for interconnection and that the chosen parameters are valid for the configuration.	
LAPV5_DL/CA/		Capability tests. Capability testing provides a limited testing to ascertain the main capabilities stated in the PICS can be observed.	

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Test Suite Structure			
Test Group Reference	Selection Ref	Test Group Objective	Page Nr
LAPV5_DL/BV/		Valid behaviour tests. A valid test is a test where the message sequence and the message contents is considered as valid (no MDL-Error shall be indicated).	
LAPV5_DL/BV/S5_0/		State 5.0	
LAPV5_DL/BV/S5_1/		State 5.1	
LAPV5_DL/BV/S7_0/		State 7.0	
LAPV5_DL/BV/S7_1/		State 7.1	
LAPV5_DL/BV/S7_4/		State 7.4	
LAPV5_DL/BV/S7_5/		State 7.5	
LAPV5_DL/BV/S8_0/		State 8.0	
LAPV5_DL/BV/S8_1/		State 8.1	
LAPV5_DL/BV/S8_4/		State 8.4	
LAPV5_DL/BV/S8_5/		State 8.5	
LAPV5_DL/BV/S9/		State 9	
LAPV5_DL/BO/		Inopportune behaviour tests. Inopportune protocol events are syntactically correct but they occur when they are not expected (a MDL_ERR_IND is caused in the FSM of the Data Link Layer entity).	
LAPV5_DL/BO/S7_0/		State 7.0	
LAPV5_DL/BO/S7_1/		State 7.1	
LAPV5_DL/BO/S7_4/		State 7.4	
LAPV5_DL/BO/S8_0/		State 8.0	
LAPV5_DL/BI/		Invalid behaviour test. An invalid protocol event is defined as a receipt of a syntactically invalid PDU, thus a MDL_ERR_IND might be caused in the FSM of the Data Link Layer entity.	
LAPV5_DL/BI/S7_0/		State 7.0	
LAPV5_DL/BI/S7_1/		State 7.1	
LAPV5_DL/BI/S7_4/		State 7.4	
LAPV5_DL/BI/S8_0/		State 8.0	
LAPV5_DL/BI/S8_1/		State 8.1	
LAPV5_DL/BI/S8_4/		State 8.4	
LAPV5_DL/TI/		Timer and counter. The TI test group contains tests related to the system timers T200, T203 and the system counter N200.	
LAPV5_DL/TI/S5_0/		State 5.0	
LAPV5_DL/TI/S5_1/		State 5.1	
LAPV5_DL/TI/S7_0/		State 7.0	
LAPV5_DL/TI/S7_4/		State 7.4	

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Test Suite Structure			
Test Group Reference	Selection Ref	Test Group Objective	Page Nr
LAPV5_DL/TI/S8_0/		State 8.0	
LAPV5_DL/TI/S8_4/		State 8.4	
Detailed Comments :			

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Test Group Reference	Test Case Id	Selection Ref	Description	Page Nr
LAPV5_EF/IT/	TC11S__01	IMPLICIT_EVENT		
LAPV5_EF/BV/	TC13S__02			
LAPV5_EF/BI/	TC15S__01			
LAPV5_EF/BI/	TC15S__02			
LAPV5_EF/BI/	TC15S__03			
LAPV5_EF/BI/	TC15S__04			
LAPV5_EF/BI/	TC15S__05			
LAPV5_EF/BI/	TC15S__06			
LAPV5_DL/IT/	TC21S__01			
LAPV5_DL/CA/	TC22S__01			
LAPV5_DL/CA/	TC22S__02			
LAPV5_DL/BV/S5_0/	TC23S5001			
LAPV5_DL/BV/S5_0/	TC23S5002			
LAPV5_DL/BV/S5_0/	TC23S5004			
LAPV5_DL/BV/S5_1/	TC23S5101			
LAPV5_DL/BV/S5_1/	TC23S5102			
LAPV5_DL/BV/S5_1/	TC23S5103			
LAPV5_DL/BV/S5_1/	TC23S5104			
LAPV5_DL/BV/S5_1/	TC23S5105			
LAPV5_DL/BV/S5_1/	TC23S5106			
LAPV5_DL/BV/S5_1/	TC23S5107			
LAPV5_DL/BV/S5_1/	TC23S5108			
LAPV5_DL/BV/S5_1/	TC23S5109			
LAPV5_DL/BV/S5_1/	TC23S5110			
LAPV5_DL/BV/S5_1/	TC23S5111			
LAPV5_DL/BV/S5_1/	TC23S5112			
LAPV5_DL/BV/S5_1/	TC23S5113			
LAPV5_DL/BV/S5_1/	TC23S5114			
LAPV5_DL/BV/S5_1/	TC23S5115			
LAPV5_DL/BV/S5_1/	TC23S5116			
LAPV5_DL/BV/S5_1/	TC23S5117			
LAPV5_DL/BV/S7_0/	TC23S7001			
LAPV5_DL/BV/S7_0/	TC23S7002			
LAPV5_DL/BV/S7_0/	TC23S7003			
LAPV5_DL/BV/S7_0/	TC23S7005			
LAPV5_DL/BV/S7_0/	TC23S7006			
LAPV5_DL/BV/S7_0/	TC23S7007			
LAPV5_DL/BV/S7_0/	TC23S7008			
LAPV5_DL/BV/S7_0/	TC23S7009			
LAPV5_DL/BV/S7_0/	TC23S7010			
LAPV5_DL/BV/S7_0/	TC23S7011			
LAPV5_DL/BV/S7_0/	TC23S7012			
LAPV5_DL/BV/S7_0/	TC23S7013			
LAPV5_DL/BV/S7_1/	TC23S7101			
LAPV5_DL/BV/S7_1/	TC23S7102			

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Test Group Reference	Test Case Id	Selection Ref	Description	Page Nr
LAPV5_DL/BV/S7_1/	TC23S7103			
LAPV5_DL/BV/S7_1/	TC23S7104			
LAPV5_DL/BV/S7_1/	TC23S7105			
LAPV5_DL/BV/S7_4/	TC23S7401			
LAPV5_DL/BV/S7_4/	TC23S7402			
LAPV5_DL/BV/S7_4/	TC23S7403			
LAPV5_DL/BV/S7_4/	TC23S7404			
LAPV5_DL/BV/S7_4/	TC23S7405			
LAPV5_DL/BV/S7_4/	TC23S7406			
LAPV5_DL/BV/S7_4/	TC23S7407			
LAPV5_DL/BV/S7_4/	TC23S7408			
LAPV5_DL/BV/S7_5/	TC23S7501			
LAPV5_DL/BV/S7_5/	TC23S7502			
LAPV5_DL/BV/S7_5/	TC23S7503			
LAPV5_DL/BV/S7_5/	TC23S7504			
LAPV5_DL/BV/S7_5/	TC23S7505			
LAPV5_DL/BV/S8_0/	TC23S8001			
LAPV5_DL/BV/S8_0/	TC23S8002			
LAPV5_DL/BV/S8_0/	TC23S8003	T200_EXPIRY_I_RE_SE NT		
LAPV5_DL/BV/S8_0/	TC23S8004	T200_EXPIRY_I_RE_SE NT		
LAPV5_DL/BV/S8_0/	TC23S8005			
LAPV5_DL/BV/S8_0/	TC23S8006			
LAPV5_DL/BV/S8_0/	TC23S8007			
LAPV5_DL/BV/S8_0/	TC23S8008			
LAPV5_DL/BV/S8_0/	TC23S8009			
LAPV5_DL/BV/S8_0/	TC23S8010			
LAPV5_DL/BV/S8_1/	TC23S8101	T200_EXPIRY_I_RE_SE NT		
LAPV5_DL/BV/S8_1/	TC23S8102			
LAPV5_DL/BV/S8_1/	TC23S8103			
LAPV5_DL/BV/S8_1/	TC23S8104			
LAPV5_DL/BV/S8_1/	TC23S8105			
LAPV5_DL/BV/S8_1/	TC23S8106			
LAPV5_DL/BV/S8_4/	TC23S8401			
LAPV5_DL/BV/S8_4/	TC23S8402			
LAPV5_DL/BV/S8_4/	TC23S8403	T200_EXPIRY_I_RE_SE NT		
LAPV5_DL/BV/S8_4/	TC23S8404	T200_EXPIRY_I_RE_SE NT		
LAPV5_DL/BV/S8_4/	TC23S8405			
LAPV5_DL/BV/S8_4/	TC23S8406			
LAPV5_DL/BV/S8_5/	TC23S8501			

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Test Group Reference	Test Case Id	Selection Ref	Description	Page Nr
LAPV5_DL/BV/S8_5/	TC23S8502	T200_EXPIRY_I_RE_SE NT		
LAPV5_DL/BV/S8_5/	TC23S8503	T200_EXPIRY_I_RE_SE NT		
LAPV5_DL/BV/S8_5/	TC23S8504			
LAPV5_DL/BV/S9/	TC23S9_01			
LAPV5_DL/BV/S9/	TC23S9_02			
LAPV5_DL/BV/S9/	TC23S9_03			
LAPV5_DL/BO/S7_0/	TC24S7001			
LAPV5_DL/BO/S7_0/	TC24S7002			
LAPV5_DL/BO/S7_0/	TC24S7003			
LAPV5_DL/BO/S7_0/	TC24S7004			
LAPV5_DL/BO/S7_0/	TC24S7005			
LAPV5_DL/BO/S7_1/	TC24S7101			
LAPV5_DL/BO/S7_1/	TC24S7102			
LAPV5_DL/BO/S7_4/	TC24S7401			
LAPV5_DL/BO/S7_4/	TC24S7402			
LAPV5_DL/BO/S7_4/	TC24S7403			
LAPV5_DL/BO/S8_0/	TC24S8001			
LAPV5_DL/BO/S8_0/	TC24S8002			
LAPV5_DL/BI/S7_0/	TC25S7001			
LAPV5_DL/BI/S7_0/	TC25S7002			
LAPV5_DL/BI/S7_0/	TC25S7003			
LAPV5_DL/BI/S7_0/	TC25S7004			
LAPV5_DL/BI/S7_0/	TC25S7005			
LAPV5_DL/BI/S7_0/	TC25S7006			
LAPV5_DL/BI/S7_0/	TC25S7007			
LAPV5_DL/BI/S7_0/	TC25S7008			
LAPV5_DL/BI/S7_0/	TC25S7009			
LAPV5_DL/BI/S7_0/	TC25S7010			
LAPV5_DL/BI/S7_0/	TC25S7011			
LAPV5_DL/BI/S7_0/	TC25S7012			
LAPV5_DL/BI/S7_0/	TC25S7013			
LAPV5_DL/BI/S7_0/	TC25S7014			
LAPV5_DL/BI/S7_0/	TC25S7015			
LAPV5_DL/BI/S7_0/	TC25S7016			
LAPV5_DL/BI/S7_0/	TC25S7017			
LAPV5_DL/BI/S7_0/	TC25S7018			
LAPV5_DL/BI/S7_1/	TC25S7101			
LAPV5_DL/BI/S7_1/	TC25S7102			
LAPV5_DL/BI/S7_4/	TC25S7401			
LAPV5_DL/BI/S7_4/	TC25S7402			
LAPV5_DL/BI/S7_4/	TC25S7403			
LAPV5_DL/BI/S7_4/	TC25S7404			

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Test Group Reference	Test Case Id	Selection Ref	Description	Page Nr
LAPV5_DL/BI/S8_0/	TC25S8001	T200_EXPIRY_I_RE_SE NT		
LAPV5_DL/BI/S8_0/	TC25S8002			
LAPV5_DL/BI/S8_0/	TC25S8003			
LAPV5_DL/BI/S8_0/	TC25S8004			
LAPV5_DL/BI/S8_0/	TC25S8005			
LAPV5_DL/BI/S8_0/	TC25S8006			
LAPV5_DL/BI/S8_0/	TC25S8007			
LAPV5_DL/BI/S8_0/	TC25S8008			
LAPV5_DL/BI/S8_1/	TC25S8101	T200_EXPIRY_I_RE_SE NT		
LAPV5_DL/BI/S8_1/	TC25S8102			
LAPV5_DL/BI/S8_4/	TC25S8401			
LAPV5_DL/BI/S8_4/	TC25S8402			
LAPV5_DL/BI/S5_0/	TC26S5001			
LAPV5_DL/BI/S5_0/	TC26S5002			
LAPV5_DL/BI/S5_1/	TC26S5101			
LAPV5_DL/BI/S7_0/	TC26S7001			
LAPV5_DL/BI/S7_0/	TC26S7002			
LAPV5_DL/BI/S7_4/	TC26S7401			
LAPV5_DL/BI/S8_0/	TC26S8001			
LAPV5_DL/BI/S8_4/	TC26S8401			
Detailed Comments :				

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Test Step Group Reference	Test Step Id	Description	Page Nr
state_transitions/V5_interface_start up/	STEP_START_UP_DL	Initialisation of the IUT, the initial state is 7.0.	
state_transitions/V5_interface_start up/	STEP_START_UP_DL_BODY	Initialisation of the IUT, the initial state is 7.0.	
state_transitions/V5_interface_start up/	STEP_START_UP_ISDN_USER_P ORT	Initialisation of the ISDN user port. New state AN2.2/LE2.2.	
state_transitions/V5_interface_start up/	STEP_DL_CTRL_ESTABLISH	Establishment of the Common Control DLL.	
state_transitions/V5_interface_start up/	STEP_DL_PSTN_ESTABLISH	Establishment of the PSTN DLL.	
state_transitions/V5_interface_start up/	STEP_ISDN_USER_PORT_ACT_A N	Activation of an ISDN user port. New state AN2.2.	
state_transitions/V5_interface_start up/	STEP_ISDN_USER_PORT_ACT_L E	Activation of an ISDN user port. New state LE2.2.	
state_transitions/V5_interface_start up/	STEP_RESTART	Restart of the NWK entity in the IUT. All NWK settings are reinitialized.	
state_transitions/V5_interface_start up/	STEP_START_UP_RESTART	Restart procedure for the start-up.	
state_transitions/V5_interface_start up/	STEP_START_UP_VID	Variant & interface ID procedure for the start-up.	
state_transitions/LAPV5_DL/	STEP_LAPV5DL_51_9	State transition from state 5.1 to state 9.	
state_transitions/LAPV5_DL/	STEP_LAPV5DL_70_51	State transition from state 7.0 to state 5.1.	
state_transitions/LAPV5_DL/	STEP_LAPV5DL_70_71	State transition from state 7.0 to state 7.1.	
state_transitions/LAPV5_DL/	STEP_LAPV5DL_70_74	State transition from state 7.0 to state 7.4.	
state_transitions/LAPV5_DL/	STEP_LAPV5DL_70_80	State transition from state 7.0 to state 8.0.	
state_transitions/LAPV5_DL/	STEP_LAPV5DL_71_75	State transition from state 7.1 to state 7.5.	
state_transitions/LAPV5_DL/	STEP_LAPV5DL_80_81	State transition from state 8.0 to state 8.1.	
state_transitions/LAPV5_DL/	STEP_LAPV5DL_80_84	State transition from state 8.0 to state 8.4.	
state_transitions/LAPV5_DL/	STEP_LAPV5DL_81_85	State transition from state 8.1 to state 8.5.	
state_transitions/LAPV5_DL/	STEP_LAPV5DL_9_50	State transition from state 9 to state 5.0.	
preamble/	Preamble_ISDN_state_4	Initialisation of the IUT for EF-ISDN tests.	
preamble/	Preamble_state_50	Initialisation of the IUT for state 5.0 test cases.	
preamble/	Preamble_state_51	Initialisation of the IUT for state 5.1 test cases.	
preamble/	Preamble_state_70	Initialisation of the IUT for state 7.0 test cases.	
preamble/	Preamble_state_71	Initialisation of the IUT for state 7.1 test cases.	

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Test Step Group Reference	Test Step Id	Description	Page Nr
preamble/	Preamble_state_74	Initialisation of the IUT for state 7.4 test cases.	
preamble/	Preamble_state_75	Initialisation of the IUT for state 7.5 test cases.	
preamble/	Preamble_state_80	Initialisation of the IUT for state 8.0 test cases.	
preamble/	Preamble_state_81	Initialisation of the IUT for state 8.1 test cases.	
preamble/	Preamble_state_84	Initialisation of the IUT for state 8.4 test cases.	
preamble/	Preamble_state_85	Initialisation of the IUT for state 8.5 test cases.	
preamble/	Preamble_state_9	Initialisation of the IUT for state 9 test cases.	
postamble/	Postamble_ISDN_DLL	Reinitialisation of the IUT for the next test case if an ISDN port was accivated. New state 7.0.	
postamble/	Postamble_DLL	Reinitialisation of the IUT for the next test case. New state 7.0.	
postamble/	Postamble_DLL_80	Reinitialisation of the IUT for the next test case from state 8.0. New state 7.0.	
status_verification/	STEP_CHECK_STATE_70	Check that the IUT is in state 7.0.	
status_verification/	STEP_CHECK_STATE_71	Check that the IUT is in state 7.0.	
status_verification/	STEP_CHECK_STATE_74	Check that the IUT is in state 7.4.	
status_verification/	STEP_CHECK_STATE_75	Check that the IUT is in state 7.5.	
status_verification/	STEP_CHECK_I_frame_exchange	An I frame exchange shall be successful. The I frame exchange is based ob the variant & interface ID req. procedure.	
common_test_steps/	STEP_RR_rsp	Receipt of a RR response and canceling of T200.	
common_test_steps/	STEP_nwk_com_ctrl_req_vid	Sending of a Common ctrl message (request variant & interface ID) and receipt of a RR response.	
common_test_steps/	STEP_nwk_cc_req_vid_cc_ack	Sending of a Common ctrl message (request variant & interface ID) and receipt of the RR response and the Common control ack.	
common_test_steps/	STEP_nwk_com_ctrl_vid_iut	Receipt of a Common ctrl message (Variant & interface ID) and sending of a Common ctrl ack message.	
common_test_steps/	STEP_nwk_com_ctrl_vid_lt1	Sending of a Common ctrl message (variant & interface ID) and receipt of a RR response.	
common_test_steps/	STEP_nwk_cc_vid_iut_proc	variant & interface ID procedure initiated by the IUT.	
Detailed Comments :			

Default Index			
Default Group Reference	Default Id	Description	Page Nr
	DEF_ISDN_PRE	Covers the default handling concerning the ISDN–DL in the preamble.	
	DEF_ISDN_BODY	Covers the default handling concerning the ISDN–DL in the test body.	
	DEF_ISDN_POST	Covers the default handling concerning the ISDN–DL in the postamble.	
	DEF_DLL_PRE	Covers the default handling concerning the DLL in the preamble.	
	DEF_DLL_BODY	Covers the default handling concerning the DLL in the test body.	
	DEF_DLL_POST	Covers the default handling concerning the DLL in the postamble.	
Detailed Comments :			

## **II**

### **Declarations Part**

Simple Type Definitions			
Type Name	Type Definition	Type Encoding	Comments
B_1	BITSTRING[1]		
B_2	BITSTRING[2]		
B_3	BITSTRING[3]		
B_4	BITSTRING[4]		
B_5	BITSTRING[5]		
B_6	BITSTRING[6]		
B_7	BITSTRING[7]		
B_8	BITSTRING[8]		
O_1	OCTETSTRING[1]		
O_2	OCTETSTRING[2]		
O_3	OCTETSTRING[3]		
O_4	OCTETSTRING[4]		
O_5	OCTETSTRING[5]		
O_6	OCTETSTRING[6]		
O_7	OCTETSTRING[7]		
O_8	OCTETSTRING[8]		
Detailed Comments :			

Structured Type Definition			
<b>Type Name</b> : dl_addr_field <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: AnnexM, fig. M.1 10.3.1, fig. 10			
Element Name	Type Definition	Field Encoding	Comments
addr_extension_bit	B_1		'0'B
command_rsp_field	B_1		
v5_dl_addr	B_6		'111111'B
v5_dl_addr_low	OCTETSTRING		length [1]
<b>Detailed Comments</b> : NOTE: The element v5_dl_addr_low is defined as an OCTETSTRING to allow format violation for invalid behaviour testing.			

Structured Type Definition			
<b>Type Name</b> : i_ctrl_field			
<b>Encoding Variation</b> :			
<b>Comments</b> : Ref.: ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Element Name	Type Definition	Field Encoding	Comments
spare	B_1		'0'B
n_s	B_7		
p	B_1		
n_r	B_7		
<b>Detailed Comments</b> :			

Structured Type Definition			
<b>Type Name</b> : s_ctrl_field			
<b>Encoding Variation</b> :			
<b>Comments</b> : Ref.: ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Element Name	Type Definition	Field Encoding	Comments
fixt_bits	B_2		'01'B
supervisory_function_bit	B_2		'0000'B
reserved_bits	B_4		
p_f	B_1		
n_r	B_7		
<b>Detailed Comments</b> :			

Structured Type Definition			
<b>Type Name</b> : u_ctrl_field			
<b>Encoding Variation</b> :			
<b>Comments</b> : Ref.: ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Element Name	Type Definition	Field Encoding	Comments
spare	B_2		'11'B
modifier_function_bit_1	B_2		
p_f	B_1		
modifier_function_bit_2	B_3		
<b>Detailed Comments</b> :			

Structured Type Definition			
<b>Type Name</b> : nwk_ctrl_function_element			
<b>Encoding Variation</b> :			
<b>Comments</b> : Ref: ETS 300 324-1 [1], 14.4.2.5.4, fig. 37			
Element Name	Type Definition	Field Encoding	Comments
info_element_id	O_1		
length	O_1		
ctrl_function_element	O_1		
<b>Detailed Comments</b> :			

Structured Type Definition			
<b>Type Name</b> : nwk_ctrl_function_id			
<b>Encoding Variation</b> :			
<b>Comments</b> : Ref.: ETS 300 324-1 [1], 14.4.2.5.5, fig. 38			
Element Name	Type Definition	Field Encoding	Comments
info_element_id	O_1		
length	O_1		
ctrl_function_id	O_1		
<b>Detailed Comments</b> :			

Structured Type Definition			
<b>Type Name</b> : nwk_interface_id			
<b>Encoding Variation</b> :			
<b>Comments</b> : Ref.: ETS 300 324-1 [1], 14.4.2.5.7, fig. 40			
Element Name	Type Definition	Field Encoding	Comments
info_element_id	O_1		
length	O_1		
interface_id	O_3		
<b>Detailed Comments</b> :			

Structured Type Definition			
<b>Type Name</b> : nwk_variant			
<b>Encoding Variation</b> :			
<b>Comments</b> : Ref.: ETS 300 324-1 [1], 14.4.2.5.6, fig. 39			
Element Name	Type Definition	Field Encoding	Comments
info_element_id	O_1		
length	O_1		
variant	O_1		
<b>Detailed Comments</b> :			



Test Suite Operation Definition	
<b>Operation Name</b> : TSO_FCS(element_1: O_2; element_2: PDU)	
<b>Result Type</b> : O_2	
<b>Comments</b> : Ref.: ETS 300 125 [8] , subclause 2.7	
Description	
The Frame Check Sequence shall be counted out of element_1 and element_2 according the rules defined in Ref.: ETS 300 125 [8] , subclause 2.7.	
<b>Detailed Comments</b> :	

Test Suite Parameter Declarations			
Parameter Name	Type	PICS/PIXIT Ref	Comments
TSPC_ISDNBA	BOOLEAN	M1	ETS 300 324-2, table 1
TSPC_PSTN	BOOLEAN	M2	ETS 300 324-2, table 1
TSPX_AN	BOOLEAN		ATS is used for AN testing, this parameter has to be set if TSPX_LE is not set.
TSPX_EF_ADDR_ISDN	O_2	ETS 300 324-1 [1], subclause 9.2.1	value: 0 – 8175 EF-address of the provisioned ISDN user port
TSPX_EF_ADDR_NOT_IMPLEMENTED	O_2	ETS 300 324-1 [1], subclauses: 9.1.5 and 9.1.9.	EF-address which is not implemented in the IUT
TSPX_USERPORT_L3_ADDR_ISDN	O_2		L3 address of the provisioned ISDN user port
TSPX_USERPORT_L3_ADDR_PSTN	O_2		L3 address of the provisioned PSTN user port
TSPX_IMPLICIT_EVENT	BOOLEAN		Are implicit events supported by the test configuration? NOTE1
TSPX_LE	BOOLEAN		ATS is used for LE testing, this parameter has to be set if TSPX_AN is not set.
TSPX_NWK_INTERFACE_ID	O_3	ETS 300 324-1 [1], 14.4.2.5.7, fig. 40, table 57	Interface ID of the IUT
TSPX_NWK_VARIANT	O_1	ETS 300 324-1 [1], 14.4.2.5.6, fig. 39, table 55	Variant of the IUT
TSPX_TC2_max	INTEGER	ETS 300 324-1 [1], table C.1	Watch dog timer of invocation of system start-up. [s]
TSPX_T200_EXPIRY_I_RE_SENT	BOOLEAN	ETS 300 125 [8], TABLE D.2	On the expiry of T200 the IUT will repeat the last sent I-frame (not send a RR cmd) . yes:=TRUE, no:=FALSE
TSPX_T_START_UP	INTEGER		How long shall be waited for the variant & interface ID procedure and the PSTN restart procedure during the start-up procedure. Duration in [s].
TSPX_T_AC_short	INTEGER		Watch dog timer if an immediate ACTION is expected from the IUT. Duration in [s].
TSPX_T200_max	INTEGER		ETS 300 324-1 [1], Annex C, table C.1 Duration in [s].
CR_0	B_1	subclause 4.3.1, table 1	AN test: '0'B LE test: '1'B
CR_1	B_1	subclause 4.3.1, table 1	AN test: '1'B LE test: '0'B

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Test Suite Parameter Declarations			
Parameter Name	Type	PICS/PIXIT Ref	Comments
TSPX_DL_PSTN_CTRL_IMPLEMENT	BOOLEAN		Is the implementation of PSTN and CTRL DLL entities identical?
<b>Detailed Comments :</b> NOTE1: The parameter TSPX_IMPLICIT_EVENT defines if implicit send events are supported by the IUT (procedures to provoke the mph_ events). The parameter is only used for the selection criterias. For automatic testing of the IUT it is possible to deselect test cases which need manual operations (implicit events) by not setting TSPX_IMPLICIT_EVENT.			

Test Case Selection Expression Definitions		
Expression Name	Selection Expression	Comments
IMPLICIT_EVENT	TSPX_IMPLICIT_EVENT	Test or test group which uses implicit events.
ISDN_PORT_PROV	TSPC_ISDNBA	1 ISDN-BA user port is provisioned
T200_EXPIRY_I_RE_SENT	TSPX_T200_EXPIRY_I_RE_SENT	On the expiry of T200 in state 7.0 the IUT will repeat the last sent I-frame (not send a RR cmd) .
<b>Detailed Comments :</b> 1) An ISDN port is provisioned as defined in DE/SPS 3003.3-3 [3], subclause 5.1.6.		

Test Suite Constant Declarations			
Constant Name	Type	Value	Comments
F_0	B_1	'0'B	P/F bit: F=0
F_1	B_1	'1'B	P/F bit: F=1
N200	INTEGER	3	ETS 300 324-1 [1], 10.4.9
P_0	B_1	'0'B	P/F bit: P=0
P_1	B_1	'1'B	P/F bit: P=1
TSC_EF_ADDR_CTRL	O_2	'FCE3'O	ETS 300 324-1 [1], 9.2.2.2, fig. M.1,
TSC_EF_ADDR_ISDN	O_2	'FCE3'O	ETS 300 324-1 [1], 9.2.2.2, fig. M.1,
TSC_EF_ADDR_FORMAT_ERR	O_2	'FFE3'O	ETS 300 324-1 [1], fig. 8. Bit 1 and bit 2 of the first octet are set to '1'B
TSC_EF_ADDR_SHORT	O_1	'FC'O	ETS 300 324-1 [1], fig. 8. The 2nd octet of the EF_addr is missing.
TSC_EF_ADDR_PSTN	O_2	'FCE1'O	ETS 300 324-1 [1], 9.2.2.2, fig. M.1,
TSC_EF_ADDR_TOO_SHORT	O_1	'FC'O	ETS 300 324-1 [1], fig. 8. contains only the first octet.
TSC_ISDN_SAPI	B_6	'000000'B	ETS 300 125 [8], 3.3.3 only used for call ctrl proced.
TSC_ISDN_TEI	O_1	'01'O	ETS 300 125 [8], 3.2 and AnnexA The TEI includes EA ('1'B). TEI is set to '0', point to point connection over a single data link.
TSC_MOD_1_DM	B_2	'11'B	ETS 300 125 [8], table5
TSC_MOD_2_DM	B_3	'000'B	ETS 300 125 [8], table5
TSC_MOD_1_SABME	B_2	'11'B	ETS 300 125 [8], table5
TSC_MOD_2_SABME	B_3	'011'B	ETS 300 125 [8], table5
TSC_MOD_1_UA	B_2	'00'B	ETS 300 125 [8], table5
TSC_MOD_2_UA	B_3	'011'B	ETS 300 125 [8], table5
TSC_SUPERVISORY_REJ	B_2	'10'B	ETS 300 125 [8], table 5
TSC_SUPERVISORY_RNR	B_2	'01'B	ETS 300 125 [8], table 5
TSC_SUPERVISORY_RR	B_2	'00'B	ETS 300 125 [8], table 5
TSC_NWK_CFE_FE104_ACT	O_1	'84'O	ETS 300 324-1 [1], table 54
TSC_NWK_CFE_FE101_ACT	O_1	'81'O	ETS 300 324-1 [1], table 54
TSC_NWK_CFE_BLOCK	O_1	'93'O	ETS 300 324-1 [1], table 54
TSC_NWK_CFE_UNBLOCK	O_1	'91'O	ETS 300 324-1 [1], table 54
TSC_NWK_CFI_ANY	O_1	'86'O	ETS 300 324-1 [1], table 55 used in case where the cfi has no importance
TSC_NWK_CFI_REQ_VID	O_1	'86'O	ETS 300 324-1 [1], table 55
TSC_NWK_CFI_RESTART_REQ	O_1	'90'O	ETS 300 324-1 [1], table 55

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Test Suite Constant Declarations			
Constant Name	Type	Value	Comments
TSC_NWK_CFI_RESTART_CPL	O_1	'91'O	ETS 300 324-1 [1], table 55
TSC_NWK_CFI_VID	O_1	'87'O	ETS 300 324-1 [1], table 55
TSC_NWK_IEI_CTRL_CFE	O_1	'20'O	ETS 300 324-1 [1], table 51
TSC_NWK_IEI_CTRL_FUNC TION_ID	O_1	'21'O	ETS 300 324-1 [1], table 51
TSC_NWK_IEI_INTERFACE _ID	O_1	'23'O	ETS 300 324-1 [1], table 51
TSC_NWK_IEI_VARIANT	O_1	'22'O	ETS 300 324-1 [1], table 51
TSC_NWK_INFO_10_OCTE TS	OCTETSTRING	'10101010101010101010'O	
TSC_NWK_METY_COM_CT RL	O_1	'12'O	ETS 300 324-1 [1], table 50
TSC_NWK_METY_COM_CT RL_ACK	O_1	'13'O	ETS 300 324-1 [1], table 50
TSC_NWK_METY_PORT_C TRL	O_1	'10'O	ETS 300 324-1 [1], table 50
TSC_NWK_METY_PORT_C TRL_ACK	O_1	'11'O	ETS 300 324-1 [1], table 50
TSC_NWK_V5_PD	O_1	'48'O	V5 protocol discriminator
TSC_NWK_V5DL_CTRL	O_2	'FCE3'O	ETS 300 324-1 [1], table 1
TSC_V5DL_CTRL	O_1	'E3'O	ETS 300 324-1 [1], table 1
TSC_V5DL_ISDN	O_1	'E3'O	ETS 300 324-1 [1], table 1
TSC_V5DL_PSTN	O_1	'E1'O	ETS 300 324-1 [1], table 1
TSC_V5DL_INVALID	O_1	'EF'O	ETS 300 324-1 [1], table 1 Not valid V5DL address
Detailed Comments :			

Test Case Variable Declarations			
Variable Name	Type	Value	Comments
R_FLAG	BOOLEAN	FALSE	flag for REPEAT command
R_COUNTER	INTEGER	0	Repetition Counter
V_A	INTEGER	0	ack state variable V(A)
V_R	INTEGER	0	receive state variable V(R)
V_R_PSTN	INTEGER	0	receive state variable V(R) for PSTN data link
V_S	INTEGER	0	send state variable V(S)
V_S_PSTN	INTEGER	0	send state variable V(S) for PSTN data link
R_VID	BOOLEAN	FALSE	flag for start-up procdeure
R_RESTART	BOOLEAN	FALSE	flag for start-up procdeure
R_UNBLOCK	BOOLEAN	FALSE	flag for start-up procdeure
Detailed Comments :			

PCO Type Declarations		
PCO Type	Role	Comments
PSAP	LT	
Detailed Comments :		



PCO Declarations			
PCO Name	PCO Type	Role	Comments
PHL	PSAP	LT	1
Detailed Comments : 1) Refer to Clause 4.			

Timer Declarations			
Timer Name	Duration	Unit	Comments
T200_min	500	ms	ETS 300 324-1 [1], 10.4.9 min. tolerance
T200_max	TSPX_T200_max	ms	ETS 300 324-1 [1], 10.4.9 max. tolerance (1500 ms)
T203_min	9	s	ETS 300 324-1 [1], 10.4.9 min. tolerance
T203_max	11	s	ETS 300 324-1 [1], 10.4.9 max. tolerance
T_AC_short	TSPX_T_AC_short	s	Watch dog timer if an immediate ACTION is expected from the IUT. (1 s)
T_AC_long	60	s	Watch dog timer if ACTION from the IUT is expected after an undefined time period.
T_NOAC	3	s	Guard timer, used if NO ACTION shall appear.
TC1_max	16	s	ETS 300 324-1 [1], Annex C, table C.1
TC2_max	TSPX_TC2_max	s	ETS 300 324-1 [1], Annex C, table C.1
TR2_max	132	s	ETS 300 324-1 [1], Annex C, table C.1
T_START_UP	TSPX_T_START_UP	s	How long shall be waited for the variant & interface ID procedure and the PSTN restart procedure during the start-up procedure.
Detailed Comments :			

ASP Type Definition		
<b>ASP Name</b> : ph_data_ind <b>PCO Type</b> : PSAP <b>Comments</b> : Ref: ETS 300 324-1 [1], AnnexM, fig. M.1 DE/SPS 3003.3-3, subclause 4.5.1		
Parameter Name	Parameter Type	Comments
envelop_function_addr	O_2	m
frame_check_sequence	O_2	m
information	PDU	m
<b>Detailed Comments</b> :		

ASP Type Definition		
<b>ASP Name</b> : ph_data_req <b>PCO Type</b> : PSAP <b>Comments</b> : Ref.: ETS 300 324-1 [1], AnnexM, fig. M.1 DE/SPS 3003.3-3, subclause 4.5.1		
Parameter Name	Parameter Type	Comments
envelop_function_addr	OCTETSTRING	m, length [2]
frame_check_sequence	O_2	m
information	PDU	m
<b>Detailed Comments</b> : To offer the possibility to send frames with incorrect ef_addr fields, the length of the envelop_function_addr field is not defined. But the normal format is OCTETSTRING[2].		

PDU Type Definition			
<b>PDU Name</b> : dl_dm_rsp <b>PCO Type</b> : PSAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Type	Field Encoding	Comments
addr_field	dl_addr_field		m
ctrl_field	u_ctrl_field		m
<b>Detailed Comments</b> : DM-response			

PDU Type Definition			
<b>PDU Name</b> : dl_i_cmd <b>PCO Type</b> : PSAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Type	Field Encoding	Comments
addr_field	dl_addr_field		m
ctrl_field	i_ctrl_field		m
information	PDU		m, NWK data
<b>Detailed Comments</b> : I-command			

PDU Type Definition			
<b>PDU Name</b> : dl_rej_cmd <b>PCO Type</b> : PSAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Type	Field Encoding	Comments
addr_field	dl_addr_field		m
ctrl_field	s_ctrl_field		m
<b>Detailed Comments</b> : REJ-command			

PDU Type Definition			
<b>PDU Name</b> : dl_rej_rsp <b>PCO Type</b> : PSAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Type	Field Encoding	Comments
addr_field	dl_addr_field		m
ctrl_field	s_ctrl_field		m
<b>Detailed Comments</b> :			

PDU Type Definition			
<b>PDU Name</b> : dl_rnr_cmd <b>PCO Type</b> : PSAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Type	Field Encoding	Comments
addr_field	dl_addr_field		m
ctrl_field	s_ctrl_field		m
<b>Detailed Comments</b> : RNR-command			

PDU Type Definition			
<b>PDU Name</b> : dl_rnr_rsp <b>PCO Type</b> : PSAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Type	Field Encoding	Comments
addr_field	dl_addr_field		m
ctrl_field	s_ctrl_field		m
<b>Detailed Comments</b> : RNR-response			

PDU Type Definition			
<b>PDU Name</b> : dl_rr_cmd <b>PCO Type</b> : PSAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Type	Field Encoding	Comments
addr_field	dl_addr_field		m
ctrl_field	s_ctrl_field		m
<b>Detailed Comments</b> : RR-command			

PDU Type Definition			
<b>PDU Name</b> : dl_rr_rsp <b>PCO Type</b> : PSAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Type	Field Encoding	Comments
addr_field	dl_addr_field		m
ctrl_field	s_ctrl_field		m
<b>Detailed Comments</b> : RR-response			

PDU Type Definition			
<b>PDU Name</b> : dl_sabme_cmd <b>PCO Type</b> : PSAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Type	Field Encoding	Comments
addr_field	dl_addr_field		m
ctrl_field	u_ctrl_field		m
<b>Detailed Comments</b> : SABME-command			

PDU Type Definition			
<b>PDU Name</b> : dl_ua_rsp <b>PCO Type</b> : PSAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Type	Field Encoding	Comments
addr_field	dl_addr_field		m
ctrl_field	u_ctrl_field		m
<b>Detailed Comments</b> : UA-response			

PDU Type Definition			
<b>PDU Name</b> : ef_info_long <b>PCO Type</b> : PSAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Used to test the max. length of a EF-frame.			
Field Name	Field Type	Field Encoding	Comments
information_1	PDU		nwk_info_long
information_2	PDU		nwk_info_long
<b>Detailed Comments</b> : The ef_info_long PDU is decined to describe large data structures is the maximum length range supported by the standard.			

PDU Type Definition			
<b>PDU Name</b> : nwk_info <b>PCO Type</b> : PSAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> :			
Field Name	Field Type	Field Encoding	Comments
any_info	OCTETSTRING[1..560]		
<b>Detailed Comments</b> : The nwk_info PDU is used as I frame data if the relevant received I frame shall be discarded and thus the IUT shall not analyze the NWK information.			

## PDU Type Definition

PDU Name : nwk\_info\_long

PCO Type : PSAP

Encoding Rule Name :

Encoding Variation :

Comments : max. length 300 OCTET

Field Name	Field Type	Field Encoding	Comments
octets_0x	OCTETSTRING[10]		
octets_1x	OCTETSTRING[10]		
octets_2x	OCTETSTRING[10]		
octets_3x	OCTETSTRING[10]		
octets_4x	OCTETSTRING[10]		
octets_5x	OCTETSTRING[10]		
octets_6x	OCTETSTRING[10]		
octets_7x	OCTETSTRING[10]		
octets_8x	OCTETSTRING[10]		
octets_9x	OCTETSTRING[10]		
octets_10x	OCTETSTRING[10]		
octets_11x	OCTETSTRING[10]		
octets_12x	OCTETSTRING[10]		
octets_13x	OCTETSTRING[10]		
octets_14x	OCTETSTRING[10]		
octets_15x	OCTETSTRING[10]		
octets_16x	OCTETSTRING[10]		
octets_17x	OCTETSTRING[10]		
octets_18x	OCTETSTRING[10]		
octets_19x	OCTETSTRING[10]		
octets_20x	OCTETSTRING[10]		
octets_21x	OCTETSTRING[10]		
octets_22x	OCTETSTRING[10]		
octets_23x	OCTETSTRING[10]		
octets_24x	OCTETSTRING[10]		
octets_25x	OCTETSTRING[10]		
octets_26x	OCTETSTRING[10]		
octets_27x	OCTETSTRING[10]		
octets_28x	OCTETSTRING[10]		
octets_29x	OCTETSTRING[10]		

**Detailed Comments :** The nwk\_info\_long PDU is used to test the maximum length of an information field which can be handled by an I frame DLL entity).

NOTE: The I frame content is split in sub OCTETSTRINGs to facilitate the handling in the ATS.  
The splitting has no relation to the protocol specification.



PDU Type Definition			
<b>PDU Name</b> : nwk_com_ctrl <b>PCO Type</b> : PSAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1], 14.4.1.3, table 48			
Field Name	Field Type	Field Encoding	Comments
protocol_discriminator	O_1		m
layer_3_addr	O_2		m
message_type	O_1		m
ctrl_function_id	nwk_ctrl_function_id		m
variant	nwk_variant		o
rejection_cause	O_1		o
interface_id	nwk_interface_id		o
<b>Detailed Comments</b> : V 5.1 NWK common control PDU			

PDU Type Definition			
<b>PDU Name</b> : nwk_com_ctrl_ack <b>PCO Type</b> : PSAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1], 14.4.1.4, table 49			
Field Name	Field Type	Field Encoding	Comments
protocol_discriminator	O_1		m
layer_3_addr	O_2		m
message_type	O_1		m
ctrl_function_id	nwk_ctrl_function_id		m
<b>Detailed Comments</b> : V5.1 NWK common control ack PDU			

PDU Type Definition			
<b>PDU Name</b> : nwk_port_ctrl <b>PCO Type</b> : PSAP <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1], 14.4.1.1, table 46			
Field Name	Field Type	Field Encoding	Comments
protocol_discriminator	O_1		m
layer_3_addr	O_2		m
message_type	O_1		m
ctrl_function_element	nwk_ctrl_function_element		m
performance_grading	O_1		o
<b>Detailed Comments</b> : V5.1 NWK port control PDU			

PDU Type Definition			
<b>PDU Name</b> : nwk_port_ctrl_ack			
<b>PCO Type</b> : PSAP			
<b>Encoding Rule Name</b> :			
<b>Encoding Variation</b> :			
<b>Comments</b> : Ref.: ETS 300 324-1 [1], 14.4.1.2, table 47			
Field Name	Field Type	Field Encoding	Comments
protocol_discriminator	O_1		m
layer_3_addr	O_2		m
message_type	O_1		m
ctrl_function_element	nwk_ctrl_function_element		m
<b>Detailed Comments</b> : V5.1 NWK port control ack PDU			

# **III**

## **Constraints Part**

Structured Type Constraint Declaration			
<b>Constraint Name</b> : BI_s_ctrl_field_short(supervisory_function: B_2) <b>Structured Type</b> : s_ctrl_field <b>Derivation Path</b> : <b>Encoding Variation</b> : <b>Comments</b> : Base constraint of an supervisory control field which contains no poll bit and no receive sequence number. The constraint is only used for invalid tests. Parameters: supervisory_function: supervisory function bit			
Element Name	Element Value	Element Encoding	Comments
fixt_bits	'01'B		
supervisory_function_bit	supervisory_function		
reserved_bits	'0000'B		
p_f	—		
n_r	—		
<b>Detailed Comments</b> :			

Structured Type Constraint Declaration			
<b>Constraint Name</b> : BI_dl_addr_field_format_err(c_r:B_1) <b>Structured Type</b> : dl_addr_field <b>Derivation Path</b> : <b>Encoding Variation</b> : <b>Comments</b> : Invalid constraint of the link address field. The extension bit is set to '1'B and the lower part of the DL address is omitted. Parameters: c_r: command/response bit			
Element Name	Element Value	Element Encoding	Comments
addr_extension_bit	'1'B		
command_rsp_field	c_r		
v5_dl_addr	'111111'B		
v5_dl_addr_low	—		
<b>Detailed Comments</b> :			

Structured Type Constraint Declaration			
<b>Constraint Name</b> : DL_addr_field(c_r:B_1; v5_dl_addr: OCTETSTRING) <b>Structured Type</b> : dl_addr_field <b>Derivation Path</b> : <b>Encoding Variation</b> : <b>Comments</b> : Base constraint of the link address field. Parameters: c_r: command/response bit v5_dl_addr: lower part of the link address field (V5DLaddr)			
Element Name	Element Value	Element Encoding	Comments
addr_extension_bit	'0'B		
command_rsp_field	c_r		
v5_dl_addr	'111111'B		
v5_dl_addr_low	v5_dl_addr		
<b>Detailed Comments</b> :			

Structured Type Constraint Declaration			
<b>Constraint Name</b> : ISDN_addr_field(c_r:B_1) <b>Structured Type</b> : dl_addr_field <b>Derivation Path</b> : <b>Encoding Variation</b> : <b>Comments</b> : Base constraint of the link address field which is used to address the ISDN entity of the IUT, thus the frame structure and values described in ETS 300 125 [8] , Clause 3.1 to Clause 3.3 are applied. The address field shall only be used for ISDN call control procedures in point to point connections over a single data link. Parameters: c_r: command/response bit			
Element Name	Element Value	Element Encoding	Comments
addr_extension_bit	'0'B		
command_rsp_field	c_r		
v5_dl_addr	TSC_ISDN_SAPI		SAPI
v5_dl_addr_low	TSC_ISDN_TEI		TEI
<b>Detailed Comments</b> :			

Structured Type Constraint Declaration			
<b>Constraint Name</b> : l_ctrl_field(n_s:INTEGER; p: B_1; n_r: INTEGER) <b>Structured Type</b> : i_ctrl_field <b>Derivation Path</b> : <b>Encoding Variation</b> : <b>Comments</b> : Base constraint of an information transfer control field. Parameters: n_s: send sequence number p: poll bit n_r: receive sequence number			
Element Name	Element Value	Element Encoding	Comments
spare	'0'B		
n_s	INT_TO_BIT(n_s, 7)		
p	p		
n_r	INT_TO_BIT(n_r, 7)		
<b>Detailed Comments</b> :			

Structured Type Constraint Declaration			
<b>Constraint Name</b> : S_ctrl_field(supervisory_function: B_2; p_f: B_1; n_r: INTEGER) <b>Structured Type</b> : s_ctrl_field <b>Derivation Path</b> : <b>Encoding Variation</b> : <b>Comments</b> : Base constraint of an supervisory control field. Parameters: supervisory_function: supervisory function bit p_f: poll bit n_r: receive sequence number			
Element Name	Element Value	Element Encoding	Comments
fixt_bits	'01'B		
supervisory_function_bit	supervisory_function		
reserved_bits	'0000'B		
p_f	p_f		
n_r	INT_TO_BIT(n_r, 7)		
<b>Detailed Comments</b> :			

Structured Type Constraint Declaration			
<b>Constraint Name</b> : U_ctrl_field(mod_function_1: B_2; p_f: B_1; mod_function_2:B_3) <b>Structured Type</b> : u_ctrl_field <b>Derivation Path</b> : <b>Encoding Variation</b> : <b>Comments</b> : Base constraint of an unnumbered control field. Parameters: mod_function_1: modifier function bits (part1) p_f: poll bit mod_function_2: modifier function bits (part2)			
Element Name	Element Value	Element Encoding	Comments
spare	'11'B		
modifier_function_bit_1	mod_function_1		
p_f	p_f		
modifier_function_bit_2	mod_function_2		
<b>Detailed Comments</b> :			

Structured Type Constraint Declaration			
<b>Constraint Name</b> : Nwk_ctrl_function_element(ctrl_func_element:O_1) <b>Structured Type</b> : nwk_ctrl_function_element <b>Derivation Path</b> : <b>Encoding Variation</b> : <b>Comments</b> : Base constraint of the NWK IE control function element. Parameters: ctrl_func_element: control function element value of control function element IE			
Element Name	Element Value	Element Encoding	Comments
info_element_id	TSC_NWK_IEI_CTRL_CFE		
length	'01'O		
ctrl_function_element	ctrl_func_element		
<b>Detailed Comments</b> :			

Structured Type Constraint Declaration			
<b>Constraint Name</b> : Nwk_ctrl_function_id(ctrl_func_id:O_1) <b>Structured Type</b> : nwk_ctrl_function_id <b>Derivation Path</b> : <b>Encoding Variation</b> : <b>Comments</b> : Base constraint of the NWK IE control function id. Parameters: ctrl_func_id: control function id value of control function id IE			
Element Name	Element Value	Element Encoding	Comments
info_element_id	TSC_NWK_IEI_CTRL_FUNC TION_ID		
length	'01'O		
ctrl_function_id	ctrl_func_id		
<b>Detailed Comments</b> :			

Structured Type Constraint Declaration			
<b>Constraint Name</b> : Nwk_interface_id <b>Structured Type</b> : nwk_interface_id <b>Derivation Path</b> : <b>Encoding Variation</b> : <b>Comments</b> : Base constraint of the NWK IE interface id.			
Element Name	Element Value	Element Encoding	Comments
info_element_id	TSC_NWK_IEI_INTERFACE _ID		
length	'03'O		
interface_id	TSPX_NWK_INTERFACE_I D		
<b>Detailed Comments</b> :			

Structured Type Constraint Declaration			
<b>Constraint Name</b> : Nwk_variant <b>Structured Type</b> : nwk_variant <b>Derivation Path</b> : <b>Encoding Variation</b> : <b>Comments</b> : Base constraint of the NWK IE variant.			
Element Name	Element Value	Element Encoding	Comments
info_element_id	TSC_NWK_IEI_VARIANT		
length	'01'O		
variant	TSPX_NWK_VARIANT		
<b>Detailed Comments</b> :			



ASP Constraint Declaration		
<b>Constraint Name</b> : BI_ph_data_req_too_short_frame(envelop_function_addr:OCTETSTRING; information:PDU) <b>ASP Type</b> : ph_data_req <b>Derivation Path</b> : Ph_data_req. <b>Comments</b> : Ref.: ETS 300 324-1 [1], AnnexM, fig. M.1		
Parameter Name	Parameter Value	Comments
envelop_function_addr	–	
information	–	
<b>Detailed Comments</b> : PH_data_req which contains too short frame (only.		

ASP Constraint Declaration		
<b>Constraint Name</b> : BI_ph_data_req_fcs_error(envelop_function_addr:OCTETSTRING; information:PDU) <b>ASP Type</b> : ph_data_req <b>Derivation Path</b> : Ph_data_req. <b>Comments</b> : Ref.: ETS 300 324-1 [1], AnnexM, fig. M.1		
Parameter Name	Parameter Value	Comments
frame_check_sequence	'0000'O	1
<b>Detailed Comments</b> : Ph_data_req whose FCS is not correct. 1) The FCS value '0000'O will never occur as the envelop function address and the information field will always contain elements with a value "> 0".		

ASP Constraint Declaration		
<b>Constraint Name</b> : Ph_data_ind(envelop_function_addr:O_2; information:PDU) <b>ASP Type</b> : ph_data_ind <b>Derivation Path</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1], AnnexM, fig. M.1		
Parameter Name	Parameter Value	Comments
envelop_function_addr	envelop_function_addr	
frame_check_sequence	TSO_FCS(envelop_function_addr, information)	
information	information	
<b>Detailed Comments</b> : Base constraint of the PH_data_ind.		

ASP Constraint Declaration		
<b>Constraint Name</b> : Ph_data_req(envelop_function_addr:OCTETSTRING; information:PDU)		
<b>ASP Type</b> : ph_data_req		
<b>Derivation Path</b> :		
<b>Comments</b> : Ref.: ETS 300 324–1 [1], AnnexM, fig. M.1		
Parameter Name	Parameter Value	Comments
envelop_function_addr	envelop_function_addr	
frame_check_sequence	TSO_FCS(envelop_function_addr, information)	
information	information	
<b>Detailed Comments</b> : Base constraint of the PH_data_req.		

PDU Constraint Declaration			
<b>Constraint Name</b> : BI_dl_rr_cmd_short(c_r:B_1; v5_dl_addr: OCTETSTRING) <b>PDU Type</b> : dl_rr_cmd <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Value	Field Encoding	Comments
addr_field	DI_addr_field(c_r, v5_dl_addr)		
ctrl_field	BI_s_ctrl_field_short(TSC_S UPERVISORY_RR)		
<b>Detailed Comments</b> : Base constraint of a RR command frame whose control field contains no poll bit and no receive sequence number. The constraint is only used for invalid tests. Parameters: c_r: command/response bit v5_dl_addr: lower part of the link address field (V5DLAddr)			

PDU Constraint Declaration			
<b>Constraint Name</b> : BI_dl_i_cmd_format_err(c_r:B_1; n_s:INTEGER; p: B_1; n_r: INTEGER;information:PDU) <b>PDU Type</b> : dl_i_cmd <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Value	Field Encoding	Comments
addr_field	BI_dl_addr_field_format_err( c_r)		
ctrl_field	I_ctrl_field(n_s, p, n_r)		
information	information		network data
<b>Detailed Comments</b> : Invalid constraint of the I command frame whose address field contains a format error. Parameters: c_r: command/response bit n_s: send sequence number p_f: poll bit n_r: receive sequence number informationn: information field			

PDU Constraint Declaration			
<b>Constraint Name</b>	: DI_dm_rsp(c_r:B_1; v5_dl_addr: OCTETSTRING; p_f:B_1)		
<b>PDU Type</b>	: dl_dm_rsp		
<b>Derivation Path</b>	:		
<b>Encoding Rule Name</b>	:		
<b>Encoding Variation</b>	:		
<b>Comments</b>	: Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5		
Field Name	Field Value	Field Encoding	Comments
addr_field	DI_addr_field(c_r, v5_dl_addr)		
ctrl_field	U_ctrl_field(TSC_MOD_1_D M, p_f, TSC_MOD_2_DM)		
<b>Detailed Comments</b> : Base constraint of the DM response frame. Parameters: c_r: command/response bit v5_dl_addr: lower part of the link address field (V5DLaddr) p_f: poll bit			

PDU Constraint Declaration			
<b>Constraint Name</b>	: DI_i_cmd(c_r:B_1; v5_dl_addr: OCTETSTRING; n_s:INTEGER; p: B_1; n_r: INTEGER; information:PDU)		
<b>PDU Type</b>	: dl_i_cmd		
<b>Derivation Path</b>	:		
<b>Encoding Rule Name</b>	:		
<b>Encoding Variation</b>	:		
<b>Comments</b>	: Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5		
Field Name	Field Value	Field Encoding	Comments
addr_field	DI_addr_field(c_r, v5_dl_addr)		
ctrl_field	I_ctrl_field(n_s, p, n_r)		
information	information		network data
<b>Detailed Comments</b> : Base constraint of the I command frame. Parameters: c_r: command/response bit v5_dl_addr: lower part of the link address field (V5DLaddr) n_s: send sequence number p_f: poll bit n_r: receive sequence number informationn: information field			

PDU Constraint Declaration			
<b>Constraint Name</b> : DL_rej_cmd(c_r:B_1; v5_dl_addr: OCTETSTRING; p_f: B_1; n_r:INTEGER) <b>PDU Type</b> : dl_rej_cmd <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Value	Field Encoding	Comments
addr_field	DI_addr_field(c_r, v5_dl_addr)		
ctrl_field	S_ctrl_field(TSC_SUPERVIS ORY_REJ, p_f, n_r)		
<b>Detailed Comments</b> : Base constraint of the REJ command frame. Parameters: c_r: command/response bit v5_dl_addr: lower part of the link address field (V5DLaddr) p_f: poll bit n_r: receive sequence number			

PDU Constraint Declaration			
<b>Constraint Name</b> : DL_rej_rsp(c_r:B_1; v5_dl_addr: OCTETSTRING; p_f: B_1; n_r: INTEGER) <b>PDU Type</b> : dl_rej_rsp <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Value	Field Encoding	Comments
addr_field	DI_addr_field(c_r, v5_dl_addr)		
ctrl_field	S_ctrl_field(TSC_SUPERVIS ORY_REJ, p_f, n_r)		
<b>Detailed Comments</b> : Base constraint of the REJ response frame. Parameters: c_r: command/response bit v5_dl_addr: lower part of the link address field (V5DLaddr) p_f: poll bit n_r: receive sequence number			

PDU Constraint Declaration			
<b>Constraint Name</b> : DI_rnr_cmd(c_r:B_1; v5_dl_addr: OCTETSTRING; p_f: B_1; n_r: INTEGER) <b>PDU Type</b> : dl_rnr_cmd <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Value	Field Encoding	Comments
addr_field	DI_addr_field(c_r, v5_dl_addr)		
ctrl_field	S_ctrl_field(TSC_SUPERVIS ORY_RNR, p_f, n_r)		
<b>Detailed Comments</b> : Base constraint of the RNR command frame. Parameters: c_r: command/response bit v5_dl_addr: lower part of the link address field (V5DLaddr) p_f: poll bit n_r: receive sequence number			

PDU Constraint Declaration			
<b>Constraint Name</b> : DI_rnr_rsp(c_r:B_1; v5_dl_addr: OCTETSTRING; p_f: B_1; n_r: INTEGER) <b>PDU Type</b> : dl_rnr_rsp <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Value	Field Encoding	Comments
addr_field	DI_addr_field(c_r, v5_dl_addr)		
ctrl_field	S_ctrl_field(TSC_SUPERVIS ORY_RNR, p_f, n_r)		
<b>Detailed Comments</b> : Base constraint of the RNR response frame. Parameters: c_r: command/response bit v5_dl_addr: lower part of the link address field (V5DLaddr) p_f: poll bit n_r: receive sequence number			

PDU Constraint Declaration			
<b>Constraint Name</b> : DL_rr_cmd(c_r:B_1; v5_dl_addr: OCTETSTRING; p_f: B_1; n_r:INTEGER) <b>PDU Type</b> : dl_rr_cmd <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Value	Field Encoding	Comments
addr_field	DL_addr_field(c_r, v5_dl_addr)		
ctrl_field	S_ctrl_field(TSC_SUPERVIS ORY_RR, p_f, n_r)		
<b>Detailed Comments</b> : Base constraint of a RR command frame. Parameters: c_r: command/response bit v5_dl_addr: lower part of the link address field (V5DLaddr) p_f: poll bit n_r: receive sequence number			

PDU Constraint Declaration			
<b>Constraint Name</b> : DL_rr_rsp(c_r:B_1; v5_dl_addr: OCTETSTRING; p_f: B_1; n_r: INTEGER) <b>PDU Type</b> : dl_rr_rsp <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Value	Field Encoding	Comments
addr_field	DL_addr_field(c_r, v5_dl_addr)		
ctrl_field	S_ctrl_field(TSC_SUPERVIS ORY_RR, p_f, n_r)		
<b>Detailed Comments</b> : Base constraint of the RR response frame. Parameters: c_r: command/response bit v5_dl_addr: lower part of the link address field (V5DLaddr) p_f: poll bit n_r: receive sequence number			

PDU Constraint Declaration			
<b>Constraint Name</b> : DI_sabme_cmd(c_r:B_1; v5_dl_addr: OCTETSTRING; p_f:B_1) <b>PDU Type</b> : dl_sabme_cmd <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Value	Field Encoding	Comments
addr_field	DI_addr_field(c_r, v5_dl_addr)		
ctrl_field	U_ctrl_field(TSC_MOD_1_S ABME, p_f, TSC_MOD_2_SABME)		
<b>Detailed Comments</b> : Base constraint of the SABME command frame. Parameters: c_r: command/response bit v5_dl_addr: lower part of the link address field (V5DLaddr) p_f: poll bit			

PDU Constraint Declaration			
<b>Constraint Name</b> : DI_ua_rsp(c_r:B_1; v5_dl_addr: OCTETSTRING; p_f:B_1) <b>PDU Type</b> : dl_ua_rsp <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Value	Field Encoding	Comments
addr_field	DI_addr_field(c_r, v5_dl_addr)		
ctrl_field	U_ctrl_field(TSC_MOD_1_U A, p_f, TSC_MOD_2_UA)		
<b>Detailed Comments</b> : Base constraint of the UA response frame. Parameters: c_r: command/response bit v5_dl_addr: lower part of the link address field (V5DLaddr) p_f: poll bit			



PDU Constraint Declaration			
<b>Constraint Name</b> : EF_info_max_EF_length <b>PDU Type</b> : ef_info_long <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Information field length [520]			
Field Name	Field Value	Field Encoding	Comments
information_1	Nwk_info_N201		length [260]
information_2	Nwk_info_N201		length [260]
<b>Detailed Comments</b> : The EF_info_max_EF_length PDU is used as I frame content to test that the IUT accepts the maximum length of EF frames (520 octets).			

PDU Constraint Declaration			
<b>Constraint Name</b> : EF_info_max_EF_length_plus <b>PDU Type</b> : ef_info_long <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Information field length [540]			
Field Name	Field Value	Field Encoding	Comments
information_1	Nwk_info_N201_plus		length [270]
information_2	Nwk_info_N201_plus		length [270]
<b>Detailed Comments</b> : The EF_info_max_EF_length_plus PDU is used as I frame content to test that the IUT reacts correct on receipt of a EF frame whose length exceeds the maximum EF frame length.			

PDU Constraint Declaration			
<b>Constraint Name</b> : ISDN_sabme_cmd(c_r:B_1; p_f:B_1) <b>PDU Type</b> : dl_sabme_cmd <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Value	Field Encoding	Comments
addr_field ctrl_field	ISDN_addr_field(c_r) U_ctrl_field(TSC_MOD_1_S ABME, p_f, TSC_MOD_2_SABME)		
<b>Detailed Comments</b> : Base constraint of the SABME command frame which is used for communication with ISDN entitys in point to point connections over a single data link. Parameters: c_r: command/response bit p_f: poll bit			

PDU Constraint Declaration			
<b>Constraint Name</b> : ISDN_ua_rsp(c_r:B_1; p_f:B_1) <b>PDU Type</b> : dl_ua_rsp <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1]: 10.1.1, fig. 9 ETS 300 125 [8]: 3.4, table 4 3.6.1, table 5			
Field Name	Field Value	Field Encoding	Comments
addr_field ctrl_field	ISDN_addr_field(c_r) U_ctrl_field(TSC_MOD_1_U A, p_f, TSC_MOD_2_UA)		
<b>Detailed Comments</b> : Base constraint of the UA response frame which is used for communication with ISDN entitys in point to point connections over a single data link. Parameters: c_r: command/response bit p_f: poll bit			

PDU Constraint Declaration			
<b>Constraint Name</b> : Nwk_info			
<b>PDU Type</b> : nwk_info			
<b>Derivation Path</b> :			
<b>Encoding Rule Name</b> :			
<b>Encoding Variation</b> :			
<b>Comments</b> :			
Field Name	Field Value	Field Encoding	Comments
any_info	'01010101010101010101'O		
<b>Detailed Comments</b> : The NWK_info PDU is used as I frame conten in tests where the IUT shall discard the received I frame and thus not analyze the NWK data.			

## PDU Constraint Declaration

**Constraint Name** : Nwk\_info\_N201  
**PDU Type** : nwk\_info\_long  
**Derivation Path** :  
**Encoding Rule Name** :  
**Encoding Variation** :  
**Comments** : Information field with a length of 250 octets.

Field Name	Field Value	Field Encoding	Comments
octets_0x	TSC_NWK_INFO_10_OCTE TS		
octets_1x	TSC_NWK_INFO_10_OCTE TS		
octets_2x	TSC_NWK_INFO_10_OCTE TS		
octets_3x	TSC_NWK_INFO_10_OCTE TS		
octets_4x	TSC_NWK_INFO_10_OCTE TS		
octets_5x	TSC_NWK_INFO_10_OCTE TS		
octets_6x	TSC_NWK_INFO_10_OCTE TS		
octets_7x	TSC_NWK_INFO_10_OCTE TS		
octets_8x	TSC_NWK_INFO_10_OCTE TS		
octets_9x	TSC_NWK_INFO_10_OCTE TS		
octets_10x	TSC_NWK_INFO_10_OCTE TS		
octets_11x	TSC_NWK_INFO_10_OCTE TS		
octets_12x	TSC_NWK_INFO_10_OCTE TS		
octets_13x	TSC_NWK_INFO_10_OCTE TS		
octets_14x	TSC_NWK_INFO_10_OCTE TS		
octets_15x	TSC_NWK_INFO_10_OCTE TS		
octets_16x	TSC_NWK_INFO_10_OCTE TS		
octets_17x	TSC_NWK_INFO_10_OCTE TS		
octets_18x	TSC_NWK_INFO_10_OCTE TS		
octets_19x	TSC_NWK_INFO_10_OCTE TS		
octets_20x	TSC_NWK_INFO_10_OCTE TS		
octets_21x	TSC_NWK_INFO_10_OCTE TS		

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PDU Constraint Declaration			
Field Name	Field Value	Field Encoding	Comments
octets_22x	TSC_NWK_INFO_10_OCTETS		
octets_23x	TSC_NWK_INFO_10_OCTETS		
octets_24x	TSC_NWK_INFO_10_OCTETS		
octets_25x	TSC_NWK_INFO_10_OCTETS		
octets_26x	–		
octets_27x	–		
octets_28x	–		
octets_29x	–		
<p><b>Detailed Comments :</b> The Nwk_info_N201 PDU is used as I frame content to test that the DL control entity accepts a frame whose length is up to N201 octets (260 octets). The length of an I-frame will be length of The I-frame specific data + I-frame information (Nwk_info_N201 PDU (250)) .</p> <p>NOTE: The I frame content is split in sub OCTETSTRINGS to facilitate the handling in the ATS. The splitting has no relation to the protocol specification.</p>			

## PDU Constraint Declaration

**Constraint Name** : Nwk\_info\_N201\_plus  
**PDU Type** : nwk\_info\_long  
**Derivation Path** :  
**Encoding Rule Name** :  
**Encoding Variation** :  
**Comments** : Information field which exceeds the max length of N201

Field Name	Field Value	Field Encoding	Comments
octets_0x	TSC_NWK_INFO_10_OCTE TS		
octets_1x	TSC_NWK_INFO_10_OCTE TS		
octets_2x	TSC_NWK_INFO_10_OCTE TS		
octets_3x	TSC_NWK_INFO_10_OCTE TS		
octets_4x	TSC_NWK_INFO_10_OCTE TS		
octets_5x	TSC_NWK_INFO_10_OCTE TS		
octets_6x	TSC_NWK_INFO_10_OCTE TS		
octets_7x	TSC_NWK_INFO_10_OCTE TS		
octets_8x	TSC_NWK_INFO_10_OCTE TS		
octets_9x	TSC_NWK_INFO_10_OCTE TS		
octets_10x	TSC_NWK_INFO_10_OCTE TS		
octets_11x	TSC_NWK_INFO_10_OCTE TS		
octets_12x	TSC_NWK_INFO_10_OCTE TS		
octets_13x	TSC_NWK_INFO_10_OCTE TS		
octets_14x	TSC_NWK_INFO_10_OCTE TS		
octets_15x	TSC_NWK_INFO_10_OCTE TS		
octets_16x	TSC_NWK_INFO_10_OCTE TS		
octets_17x	TSC_NWK_INFO_10_OCTE TS		
octets_18x	TSC_NWK_INFO_10_OCTE TS		
octets_19x	TSC_NWK_INFO_10_OCTE TS		
octets_20x	TSC_NWK_INFO_10_OCTE TS		
octets_21x	TSC_NWK_INFO_10_OCTE TS		

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PDU Constraint Declaration			
Field Name	Field Value	Field Encoding	Comments
octets_22x	TSC_NWK_INFO_10_OCTETS		
octets_23x	TSC_NWK_INFO_10_OCTETS		
octets_24x	TSC_NWK_INFO_10_OCTETS		
octets_25x	TSC_NWK_INFO_10_OCTETS		
octets_26x	TSC_NWK_INFO_10_OCTETS		
octets_27x	TSC_NWK_INFO_10_OCTETS		
octets_28x	–		
octets_29x	–		
<p><b>Detailed Comments :</b> The Nwk_info_N201_plus PDU is used as I frame content to test that the DL control entity reacts correct on receipt of a frame whose length exceeds N201 octets(270 octets).</p> <p>NOTE: The I frame content is split in sub OCTETSTRINGS to facilitate the handling in the ATS. The splitting has no relation to the protocol specification.</p>			

PDU Constraint Declaration			
<p><b>Constraint Name</b> : Nwk_info_any</p> <p><b>PDU Type</b> : nwk_info</p> <p><b>Derivation Path</b> :</p> <p><b>Encoding Rule Name</b> :</p> <p><b>Encoding Variation</b> :</p> <p><b>Comments</b> :</p>			
Field Name	Field Value	Field Encoding	Comments
any_info	?		
<p><b>Detailed Comments :</b> The Nwk_info_any is used to receive any kind of NWK data.</p>			

PDU Constraint Declaration			
<b>Constraint Name</b> : Nwk_com_ctrl_ack(ctrl_func_id:O_1) <b>PDU Type</b> : nwk_com_ctrl_ack <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1], 14.4.1.4, table 49			
Field Name	Field Value	Field Encoding	Comments
protocol_discriminator	TSC_NWK_V5_PD		
layer_3_addr	TSC_NWK_V5DL_CTRL		
message_type	TSC_NWK_METY_COM_CTRL_ACK		
ctrl_function_id	Nwk_ctrl_function_id(ctrl_func_id)		
<b>Detailed Comments</b> : Base constraint of the NWK PDU common control ack. Parameters: ctrl_func_id: control function id value of control function id IE			

PDU Constraint Declaration			
<b>Constraint Name</b> : Nwk_com_ctrl_req_vid <b>PDU Type</b> : nwk_com_ctrl <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1], 14.4.1.3, table 48			
Field Name	Field Value	Field Encoding	Comments
protocol_discriminator	TSC_NWK_V5_PD		
layer_3_addr	TSC_NWK_V5DL_CTRL		
message_type	TSC_NWK_METY_COM_CTRL		
ctrl_function_id	Nwk_ctrl_function_id(TSC_NWK_CFI_REQ_VID)		
variant	–		
rejection_cause	–		
interface_id	–		
<b>Detailed Comments</b> : Base constraint of the NWK PDU common control containing the control function id "request variant & interface id".			



PDU Constraint Declaration			
<b>Constraint Name</b> : Nwk_com_ctrl_restart_req <b>PDU Type</b> : nwk_com_ctrl <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1], 14.4.1.3, table 48			
Field Name	Field Value	Field Encoding	Comments
protocol_discriminator	TSC_NWK_V5_PD		
layer_3_addr	TSC_NWK_V5DL_CTRL		
message_type	TSC_NWK_METY_COM_CTRL		
ctrl_function_id	Nwk_ctrl_function_id(TSC_NWK_CFI_RESTART_REQ)		
variant	—		
rejection_cause	—		
interface_id	—		
<b>Detailed Comments</b> : Base constraint of the NWK PDU common control containing the control function id "restart request".			

PDU Constraint Declaration			
<b>Constraint Name</b> : Nwk_com_ctrl_restart_cpl <b>PDU Type</b> : nwk_com_ctrl <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1], 14.4.1.3, table 50			
Field Name	Field Value	Field Encoding	Comments
protocol_discriminator	TSC_NWK_V5_PD		
layer_3_addr	TSC_NWK_V5DL_CTRL		
message_type	TSC_NWK_METY_COM_CTRL		
ctrl_function_id	Nwk_ctrl_function_id(TSC_NWK_CFI_RESTART_CPL)		
variant	—		
rejection_cause	—		
interface_id	—		
<b>Detailed Comments</b> : Base constraint of the NWK PDU common control containing the control function id "restart complete".			

PDU Constraint Declaration			
<b>Constraint Name</b> : Nwk_com_ctrl_vid <b>PDU Type</b> : nwk_com_ctrl <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1], 14.4.1.3, table 48			
Field Name	Field Value	Field Encoding	Comments
protocol_discriminator	TSC_NWK_V5_PD		
layer_3_addr	TSC_NWK_V5DL_CTRL		
message_type	TSC_NWK_METY_COM_CTRL		
ctrl_function_id	Nwk_ctrl_function_id(TSC_NWK_CFI_VID)		
variant	Nwk_variant		
rejection_cause	–		
interface_id	Nwk_interface_id		
<b>Detailed Comments</b> : Base constraint of the NWK PDU common control containing the control function id "variant & interface id".			

PDU Constraint Declaration			
<b>Constraint Name</b> : Nwk_port_ctrl(ctrl_func_element:O_1;l3addr:O_2) <b>PDU Type</b> : nwk_port_ctrl <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1], 14.4.1.1, table 46			
Field Name	Field Value	Field Encoding	Comments
protocol_discriminator	TSC_NWK_V5_PD		
layer_3_addr	l3addr		
message_type	TSC_NWK_METY_PORT_CTRL		
ctrl_function_element	Nwk_ctrl_function_element(ctrl_func_element)		
performance_grading	–		
<b>Detailed Comments</b> : Base constraint of the NWK PDU port control. Parameters: ctrl_func_element: control function element value of control function element IE			

PDU Constraint Declaration			
<b>Constraint Name</b> : Nwk_port_ctrl_ack(ctrl_func_element:O_1;l3addr:O_2) <b>PDU Type</b> : nwk_port_ctrl_ack <b>Derivation Path</b> : <b>Encoding Rule Name</b> : <b>Encoding Variation</b> : <b>Comments</b> : Ref.: ETS 300 324-1 [1], 14.4.1.2, table 47			
Field Name	Field Value	Field Encoding	Comments
protocol_discriminator	TSC_NWK_V5_PD		
layer_3_addr	l3addr		
message_type	TSC_NWK_METY_PORT_C TRL_ACK		
ctrl_function_element	Nwk_ctrl_function_element(c trl_func_element)		
<b>Detailed Comments</b> : Base constraint of the NWK PDU port control ack. Parameters: ctrl_func_element: control function element value of control function element IE			

# **IV**

## **Dynamic Part**

Test Case Dynamic Behaviour						
<b>Test Case Name</b> : TC11S__01						
<b>Group</b> : LAPV5_EF/IT/						
<b>Purpose</b> : Generic test of an AN ISDN D-channel.						
A link to the ISDN-BA entity of the IUT shall be established. The ISDN-BA entity shall respond to a received SABME command with a UA response.						
NOTE: For AN testing the ISDN-BA entity is presented by an ISDN-BA terminal and for LE testing the ISDN-BA entity is presented by the LE ISDN-BA entity.						
<b>Configuration</b> :						
<b>Default</b> : DEF_ISDN_BODY						
<b>Comments</b> :						
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments	
1	B1	+Preamble_ISDN_state_4	Ph_data_req( TSPX_EF_ADDR_ISDN, ISDN_sabme_cmd(CR_1, P_1))	(PASS)	1	
2		PHL ! ph_data_req (R_FLAG:=FALSE) START T200_max				
3		REPEAT LTS_UA_response UNTIL [R_FLAG]			2	
4		+Postamble_ISDN_DLL				
5		LTS_UA_response	Ph_data_ind( TSPX_EF_ADDR_ISDN, ISDN_ua_rsp(CR_1, F_1))			
6		PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max			2.1	
7		PHL ? ph_data_ind (R_FLAG:=FALSE)			2.2	
		PHL ! ph_data_req	Ph_data_req( TSPX_EF_ADDR_ISDN, ISDN_ua_rsp(CR_0, F_1))			
<b>Detailed Comments</b> : 1) Sending of a SABME command (P=1). 2) Expected event, receipt of a UA-response. 2.1) Receipt of a UA-respons (F=1). 2.2) Receipt and handling of a SABME command.						

### Test Case Dynamic Behaviour

**Test Case Name** : TC13S\_\_02

**Group** : LAPV5\_EF/BV/

**Purpose** : Preamble: The IUT shall be brought into state 7.0.

On receipt of an I-frame (P=1) which contains an information field whose length is 520 octets (max. frame length is 537) the IUT shall handle the frame. The IUT shall send a SABME-frame (P=1).

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclauses: 9.1.5, 9.1.9, 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_70			
2		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, EF_info_max_EF_length))		1
3	B1	PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	2
4		+Postamble_DLL			

**Detailed Comments** : 1) Sending of an I frame which contains an information element whose length is 520 octets.  
2) Expected event, receipt of a SABME frame from the DL entity.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC15S__01					
<b>Group</b> : LAPV5_EF/BI/					
<b>Purpose</b> : On receipt of a frame (I-, U-, S-frame) whose EF-address is not conform to ETS 300 324-1[1], subclause 9.2.1 (format error, bit 1 and bit 2 of the first octed shall be set to '1'B), the IUT shall discard the invalid frame. Afterwards an I frame exchange shall be successful.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclauses: 9.1.5, 9.1.9					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_FORMAT_ERR , DI_i_cmd(CR_1,TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_req_vid))	(PASS)	1
2		PHL ! ph_data_req START T_NOAC			
3		?TIMEOUT T_NOAC			2
4		+STEP_CHECK_I_frame_exchange			3
5		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of an I frame whose EF-address field format is faulty, bit 1 and bit 2 of the first octed are set to '1'B instead of '0'B. 2) Expected event, no event shall occur during time T_NOAC. 3) Expected status, an I frame exchange shall be successful.					

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC15S__02					
<b>Group</b> : LAPV5_EF/BI/					
<b>Purpose</b> : On receipt of a too short frame (less than 5 octets) the IUT shall discard the invalid frame. Afterwards an I frame exchange shall be successful.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclauses: 9.1.5, 9.1.9					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	BI_ph_data_req_too_short_frame( TSC_EF_ADDR_CTRL, Nwk_info)	(PASS)	1
2		PHL ! ph_data_req START T_NOAC			
3		?TIMEOUT T_NOAC			
4		+STEP_CHECK_I_frame_exchange			
5		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of a frame which is too short, an ASP which contains only the EF-address is sent. 2) Expected event, no event shall occur during time T_NOAC. 3) Expected status, an I frame exchange shall be successful.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC15S\_\_03

**Group** : LAPV5\_EF/BI/

**Purpose** : On receipt of an unbounded I frame (more than 537 octets) the IUT shall discard the invalid frame.  
Afterwards an I frame exchange shall be successful.

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclauses: 9.1.5, 9.1.9

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_70			
2		PHL ! ph_data_req START T_NOAC	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, EF_info_max_EF_length_pl us))		1
3	B1	?TIMEOUT T_NOAC		(PASS)	2
4		+STEP_CHECK_I_frame_exchange			3
5		+Postamble_DLL			

**Detailed Comments** : 1) Sending of an I frame which contains an information element whose length is 540 octets  
--> the max. EF-frame length is exceeded.  
2) Expected event, no event shall occur during time T\_NOAC.  
3) Expected status, an I frame exchange shall be successful.

### Test Case Dynamic Behaviour

**Test Case Name** : TC15S\_\_04

**Group** : LAPV5\_EF/BI/

**Purpose** : On receipt of an frame with a FCS-error the IUT shall discard the invalid frame.  
Afterwards an I frame exchange shall be successful.

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclauses: 9.1.5, 9.1.9

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_70			
2		PHL ! ph_data_req START T_NOAC	BI_ph_data_req_fcs_error( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_1,TSC_V5DL_ CTRL, V_S, P_1, V_R, Nwk_com_ctrl_req_vid))		1
3	B1	?TIMEOUT T_NOAC		(PASS)	2
4		+STEP_CHECK_I_frame_exchange			3
5		+Postamble_DLL			

**Detailed Comments** : 1) Sending of an I frame with a FCS-error.  
2) Expected event, no event shall occur during time T\_NOAC.  
3) Expected status, an I frame exchange shall be successful.



Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC15S__05					
<b>Group</b> : LAPV5_EF/BI/					
<b>Purpose</b> : On receipt of an frame whose EF-address field length is not equal 2 octets the IUT shall discard the invalid frame. Afterwards an I frame exchange shall be successful.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclauses: 9.1.5, 9.1.9					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_TOO_SHORT, DI_i_cmd(CR_1,TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_req_vid))	(PASS)	1
2		PHL ! ph_data_req START T_NOAC			
3		?TIMEOUT T_NOAC			2
4		+STEP_CHECK_I_frame_exchange			3
5		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of an I frame whose EF-address field length is only [1]. 2) Expected event, no event shall occur during time T_NOAC. 3) Expected status, an I frame exchange shall be successful.					

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC15S__06					
<b>Group</b> : LAPV5_EF/BI/					
<b>Purpose</b> : On receipt of a frame whose EF address is not implemented the IUT shall discard the invalid frame. Afterwards an I frame exchange shall be successful.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324–1 [1], subclauses: 9.1.5, 9.1.9					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_req( TSPX_EF_ADDR_NOT_IMPLEMENTED, DI_i_cmd(CR_1,TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_req_vid))	(PASS)	1
2		PHL ! ph_data_req START T_NOAC			
3		?TIMEOUT T_NOAC			2
4		+STEP_CHECK_I_frame_exchange			3
5		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of an I frame whose EF–address is not implemented in the IUT. 2) Expected event, no event shall occur during time T_NOAC. 3) Expected status, an I frame exchange shall be successful.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC21S\_\_01

**Group** : LAPV5\_DL/IT/

**Purpose** : The IUT shall be able to establish a DLL link. On receipt of a RR command the IUT shall send a RR response.

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))	(PASS)	1
2		PHL ! ph_data_req START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+Postamble_DLL			

**Detailed Comments** : 1) Sending of a RR command (P=1).  
2) Expected event, receipt of a RR response (F=1).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC22S__01					
<b>Group</b> : LAPV5_DL/CA/					
<b>Purpose</b> : On receipt of a REJ response (F=0) the I frame with the sequence number N(S) = N(R) shall be re-transmitted.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))	(PASS)	1
2		+STEP_nwk_com_ctrl_vid_lt1			
3		START T_AC_short			
4		PHL ? ph_data_ind CANCEL T_AC_short			2
5		PHL ! ph_data_req START T_AC_short			
6		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short			
7		+Postamble_DLL			3
<b>Detailed Comments</b> : 1) Receipt of an I frame. 2) Sending of a REJ response (F=0). 3) Expected event, re-transmission of the I frame (P=0) with V(S) equal V(R).					

### Test Case Dynamic Behaviour

**Test Case Name** : TC22S\_\_02

**Group** : LAPV5\_DL/CA/

**Purpose** : On T200 expiry the IUT shall either re-send the last sent I-frame or send a RR command (P=1).

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_70			
2		+STEP_nwk_com_ctrl_vid_lt1			
3		START T_AC_short			
4		PHL ? ph_data_ind CANCEL T_AC_short, START T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack(TSC_NW K_CFI_VID)))		1
5		+LTS_I_frame_or_RR_command			2
6		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))		
7		+Postamble_DLL			
8	B1	LTS_I_frame_or_RR_command PHL ? ph_data_ind(V_R:=V_R+1) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))	(PASS)	2
9	B2	PHL ? ph_data_ind(V_R:=V_R+1) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))	(PASS)	2.1

**Detailed Comments** : 1) Receipt of an I frame (P=0, Common control ack), no response to the I frame is sent.  
 2) Expected event, on T200 expiry, receipt of a re-sent I frame (P=1, Common ctrl ack) or a RR command (P=1).  
 2.1) V\_R is incremented only for a correct RR-response.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S5001					
<b>Group</b> : LAPV5_DL/BV/S5_0/					
<b>Purpose</b> : On receipt of a SABME frame (P=1) the IUT shall send a UA frame (F=1).					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_50	Ph_data_req( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_1, TSC_V5DL_CTRL, P_1))	(PASS)	1
2		PHL ! ph_data_req (V_S:=0, V_R:=0, V_A:=0) START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of a SABME command (P=1). 2) Expected event, receipt of a UA-response (F=1).					

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S5002					
<b>Group</b> : LAPV5_DL/BV/S5_0/					
<b>Purpose</b> : On receipt of a UA frame (F=1, response to second SABME frame) the IUT shall enter state 7.0.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_50			
2		START T200_max			
3		PHL ? ph_data_ind (V_S:=0, V_R:=0, V_A:=0) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))		1
4		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_ua_rsp(CR_0, TSC_V5DL_CTRL, F_1))		2
5		+STEP_CHECK_STATE_70			3
6		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Receipt of the re-sent SABME frame (P=1). 2) Sending of an UA-response (F=1). 3) Expected status, the IUT shall be in state 7.0.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC23S5004

**Group** : LAPV5\_DL/BV/S5\_0/

**Purpose** : On receipt of a DM frame (F=1) the IUT shall enter state 9 and start the data link failure procedure (ETS 300 324-1 [1] AnnexP item 17). Afterwards the IUT shall send a SABME frame (P=1).  
If the SABME frame is not answered with a UA frame after the time TC2 the IUT shall enter state 9 and start the system start-up procedure (refer to ETS 300 324-1 [1] Annex C item 17).

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_50			
2		PHL ! ph_data_req (R_FLAG:=FALSE) START TC1_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_dm_rsp( CR_0, TSC_V5DL_CTRL, F_1))		1
3		REPEAT LTS_TIMEOUT_TC2 UNTIL [R_FLAG=TRUE]			2
4		+STEP_START_UP_DL_BODY			3
5		+Postamble_DLL			
6		LTS_TIMEOUT_TC2			
7		?TIMEOUT TC1_max START TC2_max			
8		?TIMEOUT TC2_max (R_FLAG:=TRUE)			
		PHL ? OTHERWISE (R_FLAG:=FALSE)			

**Detailed Comments** : 1) Sending of a DM response (F=1).  
2) During time TC2\_max all events are ignored.  
3) Start-up procedure shall be initiated by the IUT.

### Test Case Dynamic Behaviour

**Test Case Name** : TC23S5101

**Group** : LAPV5\_DL/BV/S5\_1/

**Purpose** : On receipt of a UA frame (F=1) the IUT shall enter state 7.0.

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_51			
2		PHL ! ph_data_req (V_A:=0,V_S:=0,V_R:=0)	Ph_data_req( TSC_EF_ADDR_CTRL, DI_ua_rsp(CR_0, TSC_V5DL_CTRL, F_1))		1
3		+STEP_CHECK_STATE_70			2
4		+Postamble_DLL			

**Detailed Comments** : 1) Sending of a UA-response (F=1).  
2) Expected status, the IUT shall be in state 7.0.

Test Case Dynamic Behaviour						
<b>Test Case Name</b> : TC23S5102						
<b>Group</b> : LAPV5_DL/BV/S5_1/						
<b>Purpose</b> : On receipt of a DM frame (F=1) the IUT shall enter state 9 and start the data link failure procedure (ETS 300 324-1 [1] AnnexP item 17). Afterwards the IUT shall send a SABME frame (P=1).						
<b>Configuration</b> :						
<b>Default</b> : DEF_DLL_BODY						
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2						
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments	
1	B1	+Preamble_state_51	Ph_data_req( TSC_EF_ADDR_CTRL, DI_dm_rsp( CR_0, TSC_V5DL_CTRL, F_1))	(PASS)	1	
2		PHL ! ph_data_req START T_AC_short				
3		PHL ? ph_data_ind CANCEL T_AC_short			Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	2
4		+Postamble_DLL				
<b>Detailed Comments</b> : 1) Sending of a DM response (F=1). 2) Expected event, receipt of a SABME frame (P=1).						

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S5103					
<b>Group</b> : LAPV5_DL/BV/S5_1/					
<b>Purpose</b> : On receipt of a DM frame (F=0) the IUT shall take no action until the T200 expiry. On T200 expiry the IUT shall send a SABME-frame (P=1).					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_51	Ph_data_req( TSC_EF_ADDR_CTRL, DI_dm_rsp( CR_0, TSC_V5DL_CTRL, F_0))  Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	1
2		PHL ! ph_data_req START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of a DM frame (F=0). 2) Expected event, receipt of a SABME command (P=1).					

## Test Case Dynamic Behaviour

Test Case Name : TC23S5104

Group : LAPV5\_DL/BV/S5\_1/

Purpose : On receipt of a RR command (P=1) the IUT shall take no action until the T200 expiry. On T200 expiry the IUT shall send a SABME-frame (P=1).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_51	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))	(PASS)	1
2		PHL ! ph_data_req START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+Postamble_DLL			

Detailed Comments : 1) Sending of a RR command (P=1).  
2) Expected event, receipt of a SABME command (P=1).

## Test Case Dynamic Behaviour

Test Case Name : TC23S5105

Group : LAPV5\_DL/BV/S5\_1/

Purpose : On receipt of a RR command (P=0) the IUT shall take no action until the T200 expiry. On T200 expiry the IUT shall send a SABME-frame (P=1).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_51	Ph_data_req (TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_1, TSC_V5DL_CTRL, P_0, V_R))	(PASS)	1
2		PHL ! ph_data_req START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+Postamble_DLL			

Detailed Comments : 1) Sending of a RR command (P=0).  
2) Expected event, receipt of a SABME command (P=1).



Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S5106					
<b>Group</b> : LAPV5_DL/BV/S5_1/					
<b>Purpose</b> : On receipt of a RR response (F=1) the IUT shall take no action until the T200 expiry. On T200 expiry the IUT shall send a SABME-frame (P=1).					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_51	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))	(PASS)	1
2		PHL ! ph_data_req START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of a RR response (F=1). 2) Expected event, receipt of a SABME command (P=1).					

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S5107					
<b>Group</b> : LAPV5_DL/BV/S5_1/					
<b>Purpose</b> : On receipt of a RR response (F=0) the IUT shall take no action until the T200 expiry. On T200 expiry the IUT shall send a SABME-frame (P=1).					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_51	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_0, V_R))	(PASS)	1
2		PHL ! ph_data_req START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of a RR response (F=0). 2) Expected event, receipt of a SABME command (P=1).					

## Test Case Dynamic Behaviour

Test Case Name : TC23S5108

Group : LAPV5\_DL/BV/S5\_1/

Purpose : On receipt of a REJ command (P=1) the IUT shall take no action until the T200 expiry. On T200 expiry the IUT shall send a SABME-frame (P=1).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_51	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rej_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))	(PASS)	1
2		PHL ! ph_data_req START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+Postamble_DLL			

Detailed Comments : 1) Sending of a REJ command (P=1).  
2) Expected event, receipt of a SABME command (P=1).

## Test Case Dynamic Behaviour

Test Case Name : TC23S5109

Group : LAPV5\_DL/BV/S5\_1/

Purpose : On receipt of a REJ command (P=0) the IUT shall take no action until the T200 expiry. On T200 expiry the IUT shall send a SABME-frame (P=1).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_51	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rej_cmd( CR_1, TSC_V5DL_CTRL, P_0, V_R))	(PASS)	1
2		PHL ! ph_data_req START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+Postamble_DLL			

Detailed Comments : 1) Sending of a REJ command (P=0).  
2) Expected event, receipt of a SABME command (P=1).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S5110					
<b>Group</b> : LAPV5_DL/BV/S5_1/					
<b>Purpose</b> : On receipt of a REJ response (F=1) the IUT shall take no action until the T200 expiry. On T200 expiry the IUT shall send a SABME-frame (P=1).					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_51	Ph_data_req(TSC_EF_ADD R_CTRL, DI_rej_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))	(PASS)	1
2		PHL ! ph_data_req START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of a REJ response (F=1). 2) Expected event, receipt of a SABME command (P=1).					

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S5111					
<b>Group</b> : LAPV5_DL/BV/S5_1/					
<b>Purpose</b> : On receipt of a REJ response (F=0) the IUT shall take no action until the T200 expiry. On T200 expiry the IUT shall send a SABME-frame (P=1).					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_51	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rej_rsp( CR_0, TSC_V5DL_CTRL, F_0, V_R))	(PASS)	1
2		PHL ! ph_data_req START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))
4		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of a REJ response (F=0). 2) Expected event, receipt of a SABME command (P=1).					

## Test Case Dynamic Behaviour

Test Case Name : TC23S5112

Group : LAPV5\_DL/BV/S5\_1/

Purpose : On receipt of a RNR command (P=1) the IUT shall take no action until the T200 expiry. On T200 expiry the IUT shall send a SABME-frame (P=1).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_51	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))	(PASS)	1
2		PHL ! ph_data_req START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+Postamble_DLL			

Detailed Comments : 1) Sending of a RNR command (P=1).  
2) Expected event, receipt of a SABME command (P=1).

## Test Case Dynamic Behaviour

Test Case Name : TC23S5113

Group : LAPV5\_DL/BV/S5\_1/

Purpose : On receipt of a RNR command (P=0) the IUT shall take no action until the T200 expiry. On T200 expiry the IUT shall send a SABME-frame (P=1).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_51	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_cmd( CR_1, TSC_V5DL_CTRL, P_0, V_R))	(PASS)	1
2		PHL ! ph_data_req START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+Postamble_DLL			

Detailed Comments : 1) Sending of a RNR command (P=0).  
2) Expected event, receipt of a SABME command (P=1).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S5114					
<b>Group</b> : LAPV5_DL/BV/S5_1/					
<b>Purpose</b> : On receipt of a RNR response (F=1) the IUT shall take no action until the T200 expiry. On T200 expiry the IUT shall send a SABME-frame (P=1).					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_51	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))	(PASS)	1
2		PHL ! ph_data_req START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of a RNR response (F=1). 2) Expected event, receipt of a SABME command (P=1).					

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S5115					
<b>Group</b> : LAPV5_DL/BV/S5_1/					
<b>Purpose</b> : On receipt of a RNR response (F=0) the IUT shall take no action until the T200 expiry. On T200 expiry the IUT shall send a SABME-frame (P=1).					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_51	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_rsp( CR_0, TSC_V5DL_CTRL, F_0, V_R))	(PASS)	1
2		PHL ! ph_data_req START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of a RNR response (F=0). 2) Expected event, receipt of a SABME command (P=1).					

### Test Case Dynamic Behaviour

**Test Case Name** : TC23S5116

**Group** : LAPV5\_DL/BV/S5\_1/

**Purpose** : On receipt of an I frame (P=1) the IUT shall take no action until the T200 expiry. On T200 expiry the IUT shall send a SABME-frame (P=1).

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_51	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_info))	(PASS)	1
2		PHL ! ph_data_req START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+Postamble_DLL			

**Detailed Comments** : 1) Sending of an I frame (P=1).  
2) Expected event, receipt of a SABME command (P=1).

### Test Case Dynamic Behaviour

**Test Case Name** : TC23S5117

**Group** : LAPV5\_DL/BV/S5\_1/

**Purpose** : On receipt of an I frame (P=0) the IUT shall take no action until the T200 expiry. On T200 expiry the IUT shall send a SABME-frame (P=1).

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_51	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_info))	(PASS)	1
2		PHL ! ph_data_req START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+Postamble_DLL			

**Detailed Comments** : 1) Sending of an I frame (P=0).  
2) Expected event, receipt of a SABME command (P=1).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S7001					
<b>Group</b> : LAPV5_DL/BV/S7_0/					
<b>Purpose</b> : On receipt of a RR command (P=1) the IUT shall send a RR response (F=1) and remain in state 7.0.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))	(PASS)	1
2		PHL ! ph_data_req START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+STEP_CHECK_STATE_70			3
5		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of a RR command (P=1). 2) Expected event, receipt of a RR response (F=1). 3) Expected status, the IUT shall be in state 7.0.					

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S7002					
<b>Group</b> : LAPV5_DL/BV/S7_0/					
<b>Purpose</b> : On receipt of a RR command (P=0) the IUT shall remain in state 7.0.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1] , subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_1, TSC_V5DL_CTRL, P_0, V_R))		1
2		PHL ! ph_data_req			
3		+STEP_CHECK_STATE_70			2
4		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of a RR command (P=0). 2) Expected status, the IUT shall remain in state 7.0.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC23S7003

**Group** : LAPV5\_DL/BV/S7\_0/

**Purpose** : On receipt of a RR response (F=0) the IUT shall remain in state 7.0.

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1] , subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_0, V_R))		1
2		PHL ! ph_data_req			
3		+STEP_CHECK_STATE_70			2
4		+Postamble_DLL			

**Detailed Comments** : 1) Sending of a RR response (F=0).

2) Expected status, the IUT shall remain in state 7.0.



Test Case Dynamic Behaviour							
<b>Test Case Name</b> : TC23S7005							
<b>Group</b> : LAPV5_DL/BV/S7_0/							
<b>Purpose</b> : On receipt of a REJ command (P=1) the IUT shall send a RR response (F=1) followed by a re-transmission of the I frame with the sequence number N(S)=N(R).							
<b>Configuration</b> :							
<b>Default</b> : DEF_DLL_BODY							
<b>Comments</b> : Ref: ETS 300 324-1 [1] , subclause 10.4.11.2							
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments		
1	B1	+LTS_pre_step	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))	(PASS)	1		
2		START T_AC_short					
3		PHL ? ph_data_ind CANCEL T_AC_short					
4		PHL ! ph_data_req START T200_max			Ph_data_req( TSC_EF_ADDR_CTRL, DI_rej_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))	2	
5		PHL ? ph_data_ind CANCEL T200_max, START T_AC_short			Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	3	
6		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short			Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))	(PASS)	4
7		PHL ! ph_data_req			Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_0, V_R))		
8		+Postamble_DLL					
9		LTS_pre_step					
10		+Preamble_state_70 +STEP_nwk_com_ctrl_vid_lt1					a
<b>Detailed Comments</b> : 1) Receipt of an I frame (Common control ack) 2) Sending of REJ command (P=1). 3) Expected event, receipt of RR response (F=1) 4) Expected event, re-transmission of the I frame (Common control ack).  LTS_pre_step: a) Sending of I frame(Common control(variant & interface ID)).							

### Test Case Dynamic Behaviour

**Test Case Name** : TC23S7006

**Group** : LAPV5\_DL/BV/S7\_0/

**Purpose** : On receipt of a RNR command (P=1) the IUT shall send a RR response (F=1) and enter state 7.4.

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1] , subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))  Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	1
2		PHL ! ph_data_req START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+STEP_CHECK_STATE_74			3
5		+Postamble_DLL			

**Detailed Comments** : 1) Sending of a RNR command (P=1).  
2) Expected event, receipt of a RR response (F=1).  
3) Expected status, the IUT shall be in state 7.4.

### Test Case Dynamic Behaviour

**Test Case Name** : TC23S7007

**Group** : LAPV5\_DL/BV/S7\_0/

**Purpose** : On receipt of a RNR command (P=0) the IUT shall enter state 7.4.

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1] , subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_cmd( CR_1, TSC_V5DL_CTRL, P_0, V_R))		1
2		PHL ! ph_data_req START T200_max			
3		+STEP_CHECK_STATE_74			2
4		+Postamble_DLL			

**Detailed Comments** : 1) Sending of RNR command (P=0).  
2) Expected status, the IUT shall be in state 7.4.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S7008					
<b>Group</b> : LAPV5_DL/BV/S7_0/					
<b>Purpose</b> : On receipt of an I frame (P=1) the IUT shall send a RR response (F=1) and remain in state 7.0.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324–1 [1] , subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))	(PASS)	1
2		PHL ! ph_data_req (V_S:=V_S+1) START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+STEP_CHECK_STATE_70			3
5		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of an I frame (P=1). 2) Expected event, receipt of an RR response. 3) Expected status, the IUT shall remain in state 7.0.					

## Test Case Dynamic Behaviour

Test Case Name : TC23S7009

Group : LAPV5\_DL/BV/S7\_0/

Purpose : On receipt of an I frame (P=0) the IUT shall acknowledge the I frame with the next I frame (if no I frame is available the IUT shall send a RR response (F=0))

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1] , subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_70			
2		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_com_ctrl_req_vid))		1
3		+LTS_I_frame_or_RR_response			2
4		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_0, V_R))		
5		+STEP_nwk_com_ctrl_vid_iut			
6		+Postamble_DLL			
		LTS_I_frame_or_RR_response			
7	B1	PHL ? ph_data_ind(V_R:=V_R+1) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_REQ_VID)))	(PASS)	2.1
8	B2	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_0, V_S))	(PASS)	2.2
9		PHL ? ph_data_ind(V_R:=V_R+1) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_REQ_VID)))		

Detailed Comments : 1) Sending of an I frame (P=0)

2) Expected event, acknowledgement of the I frame.

2.1) An I frame (P=0) is received as a response to the I frame which was sent previous.

2.2) A RR response (F=0) is received as response to the I frame which was sent previous.

--&gt; The NWK entity did not answer fast enough, therefore no I frame was available in the DLL to answer the I frame previous to the IUT sent.

NOTE: To implement the test purpose the variant &amp; interface ID NWK procedure was used.

The NWK message sequence is as follows:

--&gt; Common control(Request for variant &amp; interface ID)

&lt;-- Common control ack

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Test Case Dynamic Behaviour	
Detailed Comments : ...	<p>&lt;-- Common control(variant &amp; interface ID)</p> <p>--&gt; Common control ack</p>

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S7010 <b>Group</b> : LAPV5_DL/BV/S7_0/ <b>Purpose</b> : The IUT shall accept an I frame as the acknowledgement of a previous sent I frame. <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1 [1] , subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_70			
2		+STEP_nwk_cc_req_vid_cc_ack			
3		START T_AC_short			
4		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_vid))		1
5		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_VID)))		2
6	B1	PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_0, V_S))	(PASS)	3
7		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Receipt of an I frame (P=0). 2) Sending of an I frame (P=0) as an answer of the previous received I frame. 3) Expected event, receipt of a RR response --> acceptance of an I frame as an I frame response.  NOTE: To implement the test purpose the variant & interface ID NWK procedure was used. The NWK message sequence is as follows: --> Common control(Request for variant & interface ID) <-- Common control ack <-- Common control(variant & interface ID) --> Common control ack					

## Test Case Dynamic Behaviour

Test Case Name : TC23S7011

Group : LAPV5\_DL/BV/S7\_0/

Purpose : On receipt of an I frame (P=1) with N(S) not equal V(R) of the IUT the IUT shall discard the I frame and send a REJ response (F=1). New state: 7.1

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1] , subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_info))	(PASS)	1
2		(V_S:=V_S+1)			
3		PHL ! ph_data_req START T200_max			2
4		(V_S:=V_S-1)			3
5		PHL ? ph_data_ind CANCEL T200_max			4
6		+STEP_CHECK_STATE_71			5
7		+Postamble_DLL			

**Detailed Comments :** 1) Incrementation of V(S) --> simulation of an I frame lost.  
 2) Sending of an I frame with N(S) not equal V(R) of the IUT.  
 3) Decrementation of V(S) --> V(S) is equal to N(S) of the lost I frame.  
 4) Expected event, receipt of REJ response with N(R) equal V(S).  
 5) Expected status, the IUT shall be in state 7.1.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S7012					
<b>Group</b> : LAPV5_DL/BV/S7_0/					
<b>Purpose</b> : On receipt of an I frame (P=0) with N(S) not equal V(R) of the IUT the IUT shall discard the I frame and send a REJ response (F=0). New state: 7.1.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1] , subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_info))	(PASS)	
2		(V_S:=V_S+1)			1
3		PHL ! ph_data_req START T200_max			2
4		(V_S:=V_S-1)			3
5		PHL ? ph_data_ind CANCEL T200_max			4
6		+STEP_CHECK_STATE_71			5
7		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Incrementation of V(S) --> simulation of an I frame lost. 2) Sending of an I frame(P=0) with N(S) not equal V(R) of the IUT. 3) Decrementation of V(S) --> V(S) is equal to the lost I frame. 4) Expected event, receipt of REJ response(F=0) with N(R) equal V(S), requesting a re-transmission of the lost I frame. 5) Expected status, the IUT shall be in state 7.1.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC23S7013

**Group** : LAPV5\_DL/BV/S7\_0/

**Purpose** : On receipt of an I frame (P=1) which contains an information field whose length is N201 octets the IUT shall send a RR response (F=1).

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_info_N201))	(PASS)	1
2		PHL ! ph_data_req (V_S:=V_S+1) START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+Postamble_DLL			

**Detailed Comments** : 1) Sending of an I frame (P=0) which contains an information field with the length N201.  
2) Expected event, receipt of a RR response (F=1).

### Test Case Dynamic Behaviour

**Test Case Name** : TC23S7101

**Group** : LAPV5\_DL/BV/S7\_1/

**Purpose** : On receipt of a RNR command (P=1) the IUT shall send a RR response (F=1) and enter state 7.5.

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_71	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))	(PASS)	1
2		PHL ! ph_data_req START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+STEP_CHECK_STATE_75			
5		+Postamble_DLL			3

**Detailed Comments** : 1) Sending of RNR command (P=1).  
2) Expected event, receipt of a RR response (F=1).  
3) Expected status, the IUT shall be in state 7.5.



Test Case Dynamic Behaviour						
<b>Test Case Name</b> : TC23S7102						
<b>Group</b> : LAPV5_DL/BV/S7_1/						
<b>Purpose</b> : On receipt of an I frame (P=1) the IUT shall send a RR response (F=1) and enter state 7.0.						
<b>Configuration</b> :						
<b>Default</b> : DEF_DLL_BODY						
<b>Comments</b> : Ref: ETS 300 324–1 [1], subclause 10.4.11.2.						
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments	
1	B1	+LTS_pre_step	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))	(PASS)	1	
2		PHL ! ph_data_req (V_S:=V_S+1) START T200_max				
3		PHL ? ph_data_ind CANCEL T200_max			Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_0, V_S))	2
4		+STEP_CHECK_STATE_70				3
5		+Postamble_DLL				
6		LTS_pre_step				
7		+Preamble_state_70 (V_S:=V_S+1)				a
8		PHL ! ph_data_req START T200_max			Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))	b
9		(V_S:=V_S–1)				c
10		PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rej_rsp( CR_1, TSC_V5DL_CTRL, F_0, V_S))		d	
<b>Detailed Comments</b> : 1) Sending of an I frame (P=1), with N(S) equal V(R) of the IUT. 2) Expected event, receipt of a RR response (F=1). 3) Expected status, the IUT shall be in state 7.0.  LTS_pre_step: a) Incrementation of V(S) --> simulation of an I frame lost. b) Sending of an I frame with N(S) not equal V(R) of the IUT. c) Decrementation of V(S) --> V(S) is equal to N(S) of the lost I frame. d) Receipt of REJ response, new state: 7.1.						

## Test Case Dynamic Behaviour

Test Case Name : TC23S7103

Group : LAPV5\_DL/BV/S7\_1/

Purpose : On receipt of an I frame (P=0) the IUT shall acknowledge the I frame with the next I frame (if no I frame is available the IUT shall send a RR frame (F=0)).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_71			
2		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_com_ctrl_vid))		1
3		+LTS_I_command			
4		+Postamble_DLL			
		LTS_I_command			
5	B1	PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))	(PASS)	2
6		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_0, V_R))		
7	B2	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_0, V_S))	(PASS)	3
8		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		
9		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_0, V_R))		

**Detailed Comments :** 1) An I frame is sent containing a NWK message which requests a response from the NWK layer.  
2) Expected event, the IUT shall acknowledge the I frame with an I frame containing the NWK response.  
3) Expected event, the I frame was acknowledged by a RR response ---> no I frame was available for transmission.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S7104					
<b>Group</b> : LAPV5_DL/BV/S7_1/					
<b>Purpose</b> : On receipt of an I frame (P=1) with N(S) not equal V(R) of the IUT the IUT shall discard the I frame and send a RR response (F=1). The IUT shall remain in state 7.1.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B2	+Preamble_state_71	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_info))	(PASS)	1
2		(V_S:=V_S+1)			2
3		PHL ! ph_data_req START T200_max			3
4		(V_S:=V_S-1)			4
5		PHL ? ph_data_ind CANCEL T200_max			5
6		+STEP_CHECK_STATE_71			
7		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Incrementation of V(S) --> simulation of an I frame lost. 2) Sending of an I frame (P=1) with N(S) not equal V(R) of the IUT. 3) V_S:=V_S-1 --> N(S) which is expected from the IUT. 4) Expected event, receipt of RR response with N(R) equal V(S). 5) Expected status, the IUT shall be in state 7.1.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC23S7105

**Group** : LAPV5\_DL/BV/S7\_1/

**Purpose** : On receipt of an I frame (P=0) with N(S) not equal V(R) of the IUT the IUT shall discard the I frame and remain in state 7.1.

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_71			
2		(V_S:=V_S+1)			1
3		PHL ! ph_data_req START T_NOAC	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_info))		2
4		?TIMEOUT T_NOAC (V_S:=V_S-1)			3
5		+STEP_CHECK_STATE_71			4
6		+Postamble_DLL			

**Detailed Comments** : 1) Incrementation of V(S) --> simulation of an I frame lost.  
 2) Sending of an I frame with N(S) not equal V(R) of the IUT.  
 3) The I frame shall be discarded, no action from the IUT is allowed.  
 4) Expected status, the IUT shall be in state 7.1. V\_S is set back to the correct value.

### Test Case Dynamic Behaviour

**Test Case Name** : TC23S7401

**Group** : LAPV5\_DL/BV/S7\_4/

**Purpose** : On receipt of a RR command (P=1) the IUT shall send a RR response (F=1) and enter state 7.0.

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_74			
2		PHL ! ph_data_req START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		1
3	B1	PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	2
4		+STEP_CHECK_STATE_70			3
5		+Postamble_DLL			

**Detailed Comments** : 1) Sending of a RR command (P=1).  
 2) Expected event, receipt of a RR response (F=1).  
 3) Expected status, the IUT shall be in state 7.0.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S7402 <b>Group</b> : LAPV5_DL/BV/S7_4/ <b>Purpose</b> : On receipt of a REJ command (P=1) the IUT shall send a RR response (F=1) followed by a re-transmission of the I frame with the sequence number N(S)=N(R). <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+LTS_pre_step	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rej_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		1
2		+STEP_LAPV5DL_70_74			2
3		PHL ! ph_data_req START T200_max			
4	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	3
5	B2	PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_vid))	(PASS)	4
6		+LTS_post_step	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_vid))		
7		LTS_pre_step			
8		+Preamble_state_70			
9		+STEP_nwk_cc_req_vid_cc_ack			a
10		START T_AC_long PHL ? ph_data_ind CANCEL T_AC_long			b
11		LTS_post_step PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_0, V_R))		a
12		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_VID)))		b
13		+STEP_RR_rsp(F_0)			
14		+Postamble_DLL			

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Test Case Dynamic Behaviour
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<p><b>Detailed Comments :</b> 1) State transition to state 7.4 2) Sending of a REJ command (P=1) 3) Expected event, RR response (F=1). 4) Expected event, the IUT shall re-send the last I frame.</p> <p>LTS_pre_step: a) The variant &amp; interface ID is requested. b) First receipt of the variant &amp; interface ID</p> <p>LTS_post_step: a) RR response to last received I frame. b) Common control ack</p>
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Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S7403 <b>Group</b> : LAPV5_DL/BV/S7_4/ <b>Purpose</b> : On receipt of a REJ command (P=0) the IUT shall enter state 7.0 and re-transmit the I frame with the sequence number N(S)=N(R). <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+LTS_pre_step	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rej_cmd( CR_1, TSC_V5DL_CTRL, P_0, V_R))  Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_vid))	(PASS)	1
2		+STEP_LAPV5DL_70_74			2
3		PHL ! ph_data_req START T200_max, START T_AC_short			
4		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short			3
5		+LTS_post_step			
6		LTS_pre_step			
7		+Preamble_state_70			
8		+STEP_nwk_cc_req_vid_cc_ack			a
9		START T_AC_long			
10		PHL ? ph_data_ind CANCEL T_AC_long			b
11		LTS_post_step			
12		PHL ! ph_data_req			a
13		PHL ! ph_data_req (V_S:=V_S+1) START T200_max			b
14		+STEP_RR_rsp(F_0)			
15		+Postamble_DLL			
<b>Detailed Comments</b> : 1) State transition to state 7.4 2) Sending of a REJ command (P=0) 3) Expected event, the IUT shall re-send the last I frame.  LTS_pre_step: a) The variant & interface ID is requested.					

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### Test Case Dynamic Behaviour

Detailed Comments : ...

b) First receipt of the variant &amp; interface ID

LTS\_post\_step: a) RR response to last received I frame.

b) Common control ack

### Test Case Dynamic Behaviour

Test Case Name : TC23S7404

Group : LAPV5\_DL/BV/S7\_4/

Purpose : On receipt of a RNR command (P=1) the IUT shall send a RR response (F=1) and remain in state 7.4.

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_74			
2		PHL ! ph_data_req START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		1
3	B1	PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	2
4		+STEP_CHECK_STATE_74			3
5		+Postamble_DLL			

Detailed Comments : 1) Sending of a RNR command (P=1).  
 2) Expected event, receipt of a RR response (F=1).  
 3) Expected status, the IUT shall be in state 7.4.



Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S7405					
<b>Group</b> : LAPV5_DL/BV/S7_4/					
<b>Purpose</b> : On receipt of an I frame (P=1) the IUT shall send a RR response (F=1) and remain in state 7.4.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324–1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_74	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))	(PASS)	1
2		PHL ! ph_data_req (V_S:=V_S+1) START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			
4		+STEP_CHECK_STATE_74			
5		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of an I frame (P=1). 2) Expected event, receipt of a RR response (F=1). 3) Expected status, the IUT shall remain in state 7.4.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC23S7406

**Group** : LAPV5\_DL/BV/S7\_4/

**Purpose** : On receipt of an I frame (P=0) the IUT shall send a RR response (F=0) and remain in state 7.4.

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_74	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))	(PASS)	1
2		PHL ! ph_data_req (V_S:=V_S+1) START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+STEP_CHECK_STATE_74			3
5		+Postamble_DLL			

**Detailed Comments** : 1) Sending of an I frame (P=0).  
 2) Expected event, receipt of a RR response (F=0).  
 3) Expected status, the IUT shall remain in state 7.4.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S7407					
<b>Group</b> : LAPV5_DL/BV/S7_4/					
<b>Purpose</b> : On receipt of an I frame (P=1) with N(S) not equal V(R) of the IUT the IUT shall discard the I frame and send a REJ response with F=1. New state 7.5.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_74	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_info))	(PASS)	1
2		(V_S:=V_S+1)			2
3		PHL ! ph_data_req START T200_max			3
4		(V_S:=V_S-1)			4
5		PHL ? ph_data_ind CANCEL T200_max			5
6		+STEP_CHECK_STATE_75			
7		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Incrementation of V(S) --> simulation of an I frame lost. 2) Sending of an I frame with N(S) not equal V(R). 3) Decrementation of V(S) --> V(S) is equal to the lost I frame. 4) Expected event, receipt of REJ response with N(R) equal V(S), requesting a re-transmission of the lost I frame. 5) Expected status, the IUT shall be in state 7.5.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC23S7408

**Group** : LAPV5\_DL/BV/S7\_4/

**Purpose** : On receipt of an I frame (P=0) with N(S) not equal V(R) of the IUT the IUT shall discard the I frame and send a REJ response with F=0. New state 7.5.

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_74	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_info))	(PASS)	1
2		(V_S:=V_S+1)			
3		PHL ! ph_data_req START T200_max			2
4		(V_S:=V_S-1)			3
5		PHL ? ph_data_ind CANCEL T200_max			4
6		+STEP_CHECK_STATE_75			5
7		+Postamble_DLL			

**Detailed Comments** :

- 1) Incrementation of V(S) --> simulation of an I frame lost.
- 2) Sending of an I frame with N(S) not equal V(R).
- 3) Decrementation of V(S) --> V(S) is equal to the lost I frame.
- 4) Expected event, receipt of REJ response with N(R) equal V(S), requesting a re-transmission of the lost I frame.
- 5) Expected status, the IUT shall be in state 7.5.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S7501					
<b>Group</b> : LAPV5_DL/BV/S7_5/					
<b>Purpose</b> : On receipt of a RR command (P=1) the IUT shall send a RR response (F=1) and enter state 7.1.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324–1[1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_75	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))  Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	1
2		PHL ! ph_data_req START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+STEP_CHECK_STATE_71			3
5		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of RR command (P=1). 2) Expected event, receipt of RR response (F=1). 3) Expected status, the IUT shall be in state 7.1.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC23S7502

**Group** : LAPV5\_DL/BV/S7\_5/

**Purpose** : On receipt of an I frame (P=1) the IUT shall send a RR response (F=1) and enter state 7.4.

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1[1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_75	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))	(PASS)	1
2		PHL ! ph_data_req (V_S:=V_S+1) START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+STEP_CHECK_STATE_74			3
5		+Postamble_DLL			

**Detailed Comments** : 1) Sending of an I frame (P=1).  
2) Expected event, receipt of a RR response (F=1) .  
3) Expected status, the IUT shall be in state 7.4.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S7503					
<b>Group</b> : LAPV5_DL/BV/S7_5/					
<b>Purpose</b> : On receipt of an I frame (P=0) the IUT shall send a RR response (F=0) and enter state 7.4.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324–1[1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_75	Ph_data_req(TSC_EF_ADD R_CTRL,DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))	(PASS)	1
2		PHL ! ph_data_req (V_S:=V_S+1) START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+STEP_CHECK_STATE_74			3
5		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of an I frame (P=0). 2) Expected event, receipt of a RR response (F=0). 3) Expected status, the IUT shall be in state 7.4.					

## Test Case Dynamic Behaviour

Test Case Name : TC23S7504

Group : LAPV5\_DL/BV/S7\_5/

Purpose : On receipt of an I frame (P=1) with N(S) not equal V(R) of the IUT the IUT shall discard the I frame and send a RR response (F=1). The IUT shall remain in state 7.5.

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1[1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_75	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_info))	(PASS)	1
2		(V_S:=V_S+1)			
3		PHL ! ph_data_req START T200_max			2
4		(V_S:=V_S-1)			3
5		PHL ? ph_data_ind CANCEL T200_max			4
6		+STEP_CHECK_STATE_75			5
7		+Postamble_DLL			

Detailed Comments :

- 1) Incrementation of V(S) --> simulation of an I frame lost.
- 2) Sending of an I frame with N(S) not equal V(R).
- 3) Decrementation of V(S) --> V(S) is equal to the lost I frame.
- 4) Expected event, receipt of RR response with N(R) equal V(S).
- 5) Expected status, the IUT shall be in state 7.5.



Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S7505 <b>Group</b> : LAPV5_DL/BV/S7_5/ <b>Purpose</b> : On receipt of an I frame (P=0) with N(S) not equal V(R) of the IUT the IUT shall discard the I-frame and remain in state 7.5. <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1[1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_75			
2		(V_S:=V_S+1)			1
3		PHL ! ph_data_req START T200_min	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_info))		2
4		(V_S:=V_S-1)			3
5		?TIMEOUT T200_min			4
6		+STEP_CHECK_STATE_75			5
7		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Incrementation of V(S) --> simulation of an I frame lost. 2) Sending of an I frame with N(S) not equal V(R). 3) Decrementation of V(S) --> V(S) is equal to the lost I frame. 4) Expected behaviour, no event shall occur until the expiry of T200_max. 5) Expected status, the IUT shall be in state 7.5.					

## Test Case Dynamic Behaviour

Test Case Name : TC23S8001

Group : LAPV5\_DL/BV/S8\_0/

Purpose : On receipt of a RR command (P=1) the IUT shall send a RR response (F=1).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_80	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		1)
2		PHL ! ph_data_req (R_FLAG:=FALSE) START T200_max			
3		REPEAT LTS_RR_rsp_or_cmd UNTIL [R_FLAG]			2
4		+Postamble_DLL_80  LTS_RR_rsp_or_cmd			
5		PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	2.1
6		PHL ? ph_data_ind (R_FLAG:=FALSE)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		2.2
<b>Detailed Comments :</b> 1) Sending of a RR command (P=1) 2) Expected event, receipt of a RR response: 2.1) Receipt RR response (F=1). 2.2) On T200 expiry in the IUT the IUT re-transmits a RR command (P=1).					

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S8002 <b>Group</b> : LAPV5_DL/BV/S8_0/ <b>Purpose</b> : After having sent an I frame(P=1), on receipt of a RR response (F=1) the IUT shall enter state 7.0. <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+LTS_pre_step			
2		+LTS_lcmd_or_RRcmd			1
3		+STEP_CHECK_STATE_70			2
4		+Postamble_DLL_80			
		LTS_pre_step			
5		+Preamble_state_70			
6		+STEP_nwk_com_ctrl_vid_lt1			a
7		START T_AC_short			
8		PHL ? ph_data_ind CANCEL T_AC_short, START T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		b
		LTS_lcmd_or_RRcmd			
9		PHL ? ph_data_ind(V_R:=V_R+1) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		a
10		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))		b
11		PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		a
12		PHL ! ph_data_req START T_AC_short	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))		b
13		PHL ? ph_data_ind(V_R:=V_R+1) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		c

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Test Case Dynamic Behaviour					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
14		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_0, V_R))		
<p><b>Detailed Comments :</b> 1) On T200 time out the IUT shall re-transmit the last I frame (P=1) or it shall send a RR command (P=1), new state 8.0.  2) Sending of a RR response (F=1).  3) Expected status, the IUT shall be in state 7.0.</p> <p>LTS_pre_step:  a) Sending of I frame(Common control(variant &amp; interface ID)).  b) Receipt of I frame (P=0, Common Control ack).</p> <p>LTS_lcmd_or_RRcmd:  a) On T200 time out the IUT shall re-transmit the last I frame (P=1) or it shall send a RR command (P=1), new state 8.0.  b) Sending of a RR response (F=1).  c) In case a RR command was sent last, the last I-frame shall be re-sent</p>					

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S8003 <b>Group</b> : LAPV5_DL/BV/S8_0/ <b>Purpose</b> : On receipt of a REJ command (P=1) the IUT shall send a RR response (F=1) followed by a re-transmission of the I frame with the sequence number N(S)=N(R).  NOTE: This test is only applicable if the IUT re-sends in case of a T200 expiry the last sent I-frame as a REJ message is a valid response to an I-frame but not to a RR-command. <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+LTS_pre_step			
2		PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		1
3		PHL ! ph_data_req START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rej_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		2
4	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	3
5	B2	PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))	(PASS)	4
6		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))		
7		+Postamble_DLL_80			
8		LTS_pre_step			
9		+Preamble_state_70			
10		+STEP_nwk_com_ctrl_vid_lt1			a
11		START T_AC_short			
		PHL ? ph_data_ind CANCEL T_AC_short, START T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		b

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Test Case Dynamic Behaviour
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<p><b>Detailed Comments :</b> 1) On T200 expiry the IUT shall re-transmit the I frame (P=1, Common control ack) last sent. New state 8.0.</p> <p>2) Sending of REJ command (P=1).</p> <p>3) Expected event, receipt of a RR response (F=1).</p> <p>4) Expected event, re-transmission of the I frame (P=1, Common control ack).</p> <p>LTS_pre_step: a) Sending of I frame(Common control(variant &amp; interface ID)). b) Receipt of I frame (P=0, Common Control ack).</p>
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Test Case Dynamic Behaviour							
<b>Test Case Name</b> : TC23S8004							
<b>Group</b> : LAPV5_DL/BV/S8_0/							
<b>Purpose</b> : On receipt of a REJ response (F=1) the IUT shall enter state 7.0 and re-transmit the I frame with the sequence number N(S) = N(R).							
NOTE: This test is only applicable if the IUT re-sends in case of a T200 expiry the last sent I-frame as a REJ message is a valid response to an I-frame but not to a RR-command.							
<b>Configuration</b> :							
<b>Default</b> : DEF_DLL_BODY							
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2							
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments		
1	B1	+LTS_pre_step	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))	(PASS)	1		
2		PHL ? ph_data_ind CANCEL T200_max					
3		PHL ! ph_data_req START T_AC_short				2	
4		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short				3	
5		PHL ! ph_data_req					
6		+Postamble_DLL_80					
7		LTS_pre_step					
8		+Preamble_state_70					
9		+STEP_nwk_com_ctrl_vid_lt1					a
10		START T_AC_short PHL ? ph_data_ind CANCEL T_AC_short, START T200_max			Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		b
<b>Detailed Comments</b> : 1) On T200 expiry the IUT shall re-transmit the I frame (P=1, Common control ack) last sent. New state 8.0. V_R is not increased . 2) Sending of REJ response (F=1), requesting a re-send of the last received I-frame. 3) Expected event, re-transmission of the I frame (P=0, Common control ack).							

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## Test Case Dynamic Behaviour

## Detailed Comments : ...

- LTS\_pre\_step: a) Sending of I frame(Common control(variant & interface ID)).  
b) Receipt of I frame (P=0, Common Control ack).

## Test Case Dynamic Behaviour

Test Case Name : TC23S8005

Group : LAPV5\_DL/BV/S8\_0/

Purpose : On receipt of a RNR command (P=1) the IUT shall send a RR response (F=1).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_80			
2		PHL ! ph_data_req (R_FLAG:=FALSE) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		1
3		REPEAT LTS_RR_rsp_or_cmd UNTIL [R_FLAG]			2
4		+Postamble_DLL_80			
5	B1	LTS_RR_rsp_or_cmd PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	2.1
6		PHL ? ph_data_ind (R_FLAG:=FALSE)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		2.2

Detailed Comments : 1) Sending of a RNR command(P=1).

2) Expected event, receipt of a RR response:

2.1) Receipt RR response (F=1).

2.2) On T200 expiry in the IUT the IUT re-transmits a RR command (P=1).



Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S8006 <b>Group</b> : LAPV5_DL/BV/S8_0/ <b>Purpose</b> : After having sent an I frame, on receipt of a RNR response (F=1) the IUT shall enter state 7.4. <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+LTS_pre_step			
2		+LTS_lcmd_or_RRcmd			1
3		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))		2
4		+STEP_CHECK_STATE_74			3
5		START T_AC_short			
6		PHL ? ph_data_ind(V_R:=V_R+1) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		4
7		+Postamble_DLL_80			
8		?TIMEOUT T_AC_short			4
9		+Postamble_DLL_80			
		LTS_pre_step			
10		+Preamble_state_70			
11		+STEP_nwk_com_ctrl_vid_lt1			a
12		START T_AC_short			
13		PHL ? ph_data_ind CANCEL T_AC_short, START T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		b
		LTS_lcmd_or_RRcmd			
14		PHL ? ph_data_ind(V_R:=V_R+1) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		
15		PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, F_1, V_S))		

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**Test Case Dynamic Behaviour**

**Detailed Comments :** 1) On T200 time out the IUT shall re-transmit the last I frame (P=1) or it shall send a RR command (P=1), new state 8.0.  
 2) Sending of RNR response (F=1).  
 3) Expected status, the IUT shall be in state 7.4.  
 4) If an RR-command was sent after T200 expiry, the IUT will re-sent the I frame (Common control(variant & interface ID) last sent, otherwise T\_AC\_short will expire.

LTS\_pre\_step: a) Sending of I frame(Common control(variant & interface ID).  
 b) Receipt of I frame (P=0, Common Control ack).

**Test Case Dynamic Behaviour****Test Case Name :** TC23S8007**Group :** LAPV5\_DL/BV/S8\_0/**Purpose :** On receipt of an I frame (P=1) the IUT shall send a RR response (F=1).**Configuration :****Default :** DEF\_DLL\_BODY**Comments :** Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_80			
2		PHL ! ph_data_req (V_S:=V_S+1, R_FLAG:=FALSE) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))		1
3		REPEAT LTS_RR_rsp_or_cmd UNTIL [R_FLAG]			2
4		+Postamble_DLL_80			
5	B1	LTS_RR_rsp_or_cmd PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	2.1
6		PHL ? ph_data_ind (R_FLAG:=FALSE)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		2.2

**Detailed Comments :** 1) Sending on an I frame (P=1).  
 2) Expected event, receipt of a RR response:  
 2.1) Receipt RR response (F=1).  
 2.2) On T200 expiry the IUT re-sends a RR command (P=1).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S8008 <b>Group</b> : LAPV5_DL/BV/S8_0/ <b>Purpose</b> : On receipt of an I frame (P=0) the IUT shall acknowledge the I frame with the next I frame (if no I frame is available the IUT shall send a RR frame (F=0)). <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_80			
2		PHL ! ph_data_req (V_S:=V_S+1, R_FLAG:=FALSE) START T200_max, START T_AC_short	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_com_ctrl_vid))		1
3		REPEAT LTS_I_frame_or_RR_rsp UNTIL [R_FLAG]			2
4		+LTS_free_I_queue			
5		+Postamble_DLL_80			
		LTS_I_frame_or_RR_rsp			
6	B1	PHL ? ph_data_ind (V_R:=V_R+1, R_FLAG:=TRUE) CANCEL T200_max, CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))	(PASS)	2.1
7	B2	PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_0, V_S))	(PASS)	2.2
8	B3	PHL ? ph_data_ind (V_R:=V_R+1) START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))	(PASS)	2.3
9	B4	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		2.4
10	B5	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		2.4
11		PHL ! ph_data_req START T_AC_short	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))		2.5

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Test Case Dynamic Behaviour					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
12	B6	PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))	(PASS)	2.3
13	B7	PHL ? ph_data_ind	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		2.4
14		LTS_free_I_queue START T_AC_short			
15		PHL ? ph_data_ind (V_R:=BIT_TO_INT(dl_i_cmd.ctrl_field.n_s) +1) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, ?, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		
16		?TIMEOUT T_AC_short			
17		?OTHERWISE			
<b>Detailed Comments :</b> 1) Sending of an I frame (P=0) 2) Expected event, acknowledgement of the I frame. 2.1) An I frame (P=1) is received as a response to the I frame which was sent previous. 2.2) A RR response (F=0) is received as response to the I frame which was sent previous. --> The NWK entity did not answer fast enough, therefore no I frame was available in the DLL to answer the I frame previous sent to the IUT. 2.3) An I frame (P=0) is received as a response to the I frame which was sent previous. 2.4) On T200 expiry in the IUT re-transmits a RR command (P=1). 2.5) Response to RR command.					

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S8009					
<b>Group</b> : LAPV5_DL/BV/S8_0/					
<b>Purpose</b> : On receipt of an I frame (P=1) with N(S) not equal V(R) of the IUT the IUT shall discard the I frame and send a REJ response (F=1).					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_80	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_info))		1
2		(V_S:=V_S+1)			2
3		PHL ! ph_data_req (R_FLAG:=FALSE) START T200_max			
4		(V_S:=V_S-1)			3
5		REPEAT LTS_REJ_or_RR UNTIL [R_FLAG]			4
6		+Postamble_DLL_80			
7		LTS_REJ_or_RR PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rej_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	4.1
8		PHL ? ph_data_ind (R_FLAG:=FALSE)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		4.2
<b>Detailed Comments</b> : 1) Incrementation of V(S) --> simulation of an I frame lost. 2) Sending of an I frame(P=1) with N(S) not equal V(R) of the IUT. 3) Decrementation of V(S) --> V(S) is equal to the lost I frame. 4) Expected event, receipt of a REJ response: 4.1) Receipt of REJ response (F=1) with N(R) equal V(S), requesting a re-transmission of the los I frame. 4.2) On T200 expiry in the IUT the IUT re-transmits a RR command (P=1).					

## Test Case Dynamic Behaviour

Test Case Name : TC23S8010

Group : LAPV5\_DL/BV/S8\_0/

Purpose : On receipt of an I frame (P=0) with N(S) not equal V(R) of the IUT the IUT shall discard the I frame and send a REJ response (F=0).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_80			
2		(V_S:=V_S+1)			1
3		PHL ! ph_data_req (R_FLAG:=FALSE) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_info))		2
4		(V_S:=V_S-1)			3
5		REPEAT LTS_REJ_or_RR UNTIL [R_FLAG]			4
6		+Postamble_DLL_80			
7	B1	LTS_REJ_or_RR PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rej_rsp( CR_1, TSC_V5DL_CTRL, F_0, V_S))	(PASS)	4.1
8		PHL ? ph_data_ind (R_FLAG:=FALSE)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		4.2

**Detailed Comments :**

- 1) Incrementation of V(S) --> simulation of an I frame lost.
- 2) Sending of an I frame(P=0) with N(S) not equal V(R) of the IUT.
- 3) Decrementation of V(S) --> V(S) is equal to the lost I frame.
- 4) Expected event, receipt of a REJ response:
  - 4.1) Receipt of REJ response(F=0) with N(R) equal V(S), requesting a re-transmission of the lost I frame.
  - 4.2) On T200 expiry in the IUT the IUT re-transmits a RR command (P=1).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S8101 <b>Group</b> : LAPV5_DL/BV/S8_1/ <b>Purpose</b> : On receipt of a REJ response (F=1) the IUT shall enter state 7.1 and re-transmit the I frame with the sequence number N(S) = N(R).  <p style="text-align: center;">NOTE: This test is only applicable if the IUT re-sends in case of a T200 expiry the last sent I-frame as a REJ message is a valid response to an I-frame but not to a RR-command.</p> <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B_1	+LTS_pre_step	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))	(PASS)	1
2		+STEP_LAPV5DL_80_81			2
3		START T200_max			
4		PHL ? ph_data_ind CANCEL T200_max			
5		PHL ! ph_data_req START T_AC_short			3
6		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short			4
7		PHL ! ph_data_req			
8		+Postamble_DLL			
9		LTS_pre_step			
10		+Preamble_state_70			
11		+STEP_nwk_com_ctrl_vid_lt1			a
12		START T_AC_short PHL ? ph_data_ind CANCEL T_AC_short, START T200_max			b

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Test Case Dynamic Behaviour					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
13		PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		c
<b>Detailed Comments :</b> 1) State transition from state 8.0 to state 8.1. 2) Receipt of an I frame (P=1, Common control ack) after second T200 expiry. 3) Sending of a REJ response (F=1), New state 7.1. 4) Expected event, re-transmission of requested I frame (P=0, Common control ack).  LTS_pre_step: a) Sending of I frame(Common control(variant & interface ID)). b) Receipt of an I frame(Common control ack) c) Timeout of T200, re-transmission of I frame(Common control ack). New state 8.0					

Test Case Dynamic Behaviour					
<b>Test Case Name :</b> TC23S8102 <b>Group :</b> LAPV5_DL/BV/S8_1/ <b>Purpose :</b> On receipt of a RNR command (P=1) the IUT shall send a RR response (F=1). <b>Configuration :</b> <b>Default :</b> DEF_DLL_BODY <b>Comments :</b> Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_81	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		1
2		PHL ! ph_data_req (R_FLAG:=FALSE) START T200_max			
3		REPEAT LTS_RR_rsp_or_cmd UNTIL [R_FLAG]			2
4		+Postamble_DLL			
5		LTS_RR_rsp_or_cmd	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	2.2
6		PHL ? ph_data_ind (R_FLAG:=FALSE)			
			Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		2.2
<b>Detailed Comments :</b> 1) Sending of a RNR command(P=1). 2) Expected event, receipt of a RR response: 2.1) Receipt RR response (F=1). 2.2) On T200 expiry in the IUT the IUT re-transmits a RR command (P=1).					



Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S8103 <b>Group</b> : LAPV5_DL/BV/S8_1/ <b>Purpose</b> : After having sent an I frame, on receipt of a RNR response (F=1) the IUT shall enter state 7.5. <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+LTS_pre_step			
2		+LTS_lcmd_or_RRcmd			1
3		+STEP_LAPV5DL_80_81			2
4		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))		3
5		+STEP_CHECK_STATE_75			4
6		+Postamble_DLL			
		LTS_pre_step			
7		+Preamble_state_70			
8		+STEP_nwk_com_ctrl_vid_lt1			a
9		START T_AC_short			
10		PHL ? ph_data_ind CANCEL T_AC_short, START T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		b
		LTS_lcmd_or_RRcmd			
11		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		
12		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		
<b>Detailed Comments</b> : 1) On T200 time out the IUT shall re-transmit the last I frame (P=1) or it shall send a RR command (P=1), new state 8.0. 2) State transition from state 8.0 to state 8.1. 3) Sending of RNR response (F=1). 4) Expected status, the IUT shall be in state 7.5.  LTS_pre_step: a) Sending of I frame(Common control(variant & interface ID)). b) Receipt of I frame (P=0, Common Control ack).					

## Test Case Dynamic Behaviour

Test Case Name : TC23S8104

Group : LAPV5\_DL/BV/S8\_1/

Purpose : On receipt of an I frame (P=1) the IUT shall send a RR response (F=1).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_81	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))	(PASS)	1
2		PHL ! ph_data_req (V_S:=V_S+1, R_FLAG:=FALSE) START T200_max			
3		REPEAT LTS_RR_rsp_or_cmd UNTIL [R_FLAG]			2
4		+Postamble_DLL			
5		LTS_RR_rsp_or_cmd			
6		PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max			2.1
6		PHL ? ph_data_ind (R_FLAG:=FALSE)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))  Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		2.2

Detailed Comments : 1) Sending on an I frame (P=1).

2) Expected event, receipt of a RR response:

2.1) Receipt RR response (F=1).

2.2) On T200 expiry in the IUT the IUT re-transmits a RR command (P=1).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S8105 <b>Group</b> : LAPV5_DL/BV/S8_1/ <b>Purpose</b> : On receipt of an I frame (P=0) the IUT shall acknowledge the I frame with the next I frame (if no I frame is available the IUT shall send a RR frame (F=0)). <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_81			
2		PHL ! ph_data_req (V_S:=V_S+1, R_FLAG:=FALSE) START T200_max, START T_AC_short	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_com_ctrl_vid))		1
3		REPEAT LTS_I_frame_or_RR_rsp UNTIL [R_FLAG]			2
4		+LTS_free_I_queue			
5		+Postamble_DLL			
		LTS_I_frame_or_RR_rsp			
6	B1	PHL ? ph_data_ind (V_R:=V_R+1, R_FLAG:=TRUE) CANCEL T200_max, CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))	(PASS)	2.1
7	B2	PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_0, V_S))	(PASS)	2.2
8		PHL ? ph_data_ind (R_FLAG:=FALSE)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		2.3
		LTS_free_I_queue			
9		START T_AC_short			
10		PHL ? ph_data_ind (V_R:=BIT_TO_INT(dl_i_cmd.ctrl_field.n_s) +1) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, ?, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		
11		?TIMEOUT T_AC_short			
12		?OTHERWISE			
<b>Detailed Comments</b> : 1) Sending of an I frame (P=0) 2) Expected event, acknowledgement of the I frame. 2.1) An I frame (P=1) is received as a response to the I frame which was sent previous. 2.2) A RR response (F=0) is received as response to the I frame which was sent previous. --> The NWK entity did not answer fast enough, therefore no I frame was available in					

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## Test Case Dynamic Behaviour

## Detailed Comments : ...

the DLL to answer the I frame previous sent to the IUT.  
2.3) On T200 expiry in the IUT the IUT re-transmits a RR command (P=1).

## Test Case Dynamic Behaviour

Test Case Name : TC23S8106

Group : LAPV5\_DL/BV/S8\_1/

Purpose : On receipt of an I frame (P=1) with N(S) not equal V(R) of the IUT the IUT shall discard the I frame and send a RR response (F=1).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_81			
2		(V_S:=V_S+1)			1
3		PHL ! ph_data_req (R_FLAG:=FALSE) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_info))		2
4		(V_S:=V_S-1)			3
5		REPEAT LTS_RR_rsp_or_cmd UNTIL [R_FLAG]			4
6		+Postamble_DLL			
7	B1	LTS_RR_rsp_or_cmd PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	4.1
8		PHL ? ph_data_ind (R_FLAG:=FALSE)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		4.2

Detailed Comments : 1) Incrementation of V(S) --> simulation of an I frame lost.  
2) Sending of an I frame(P=1) with N(S) not equal V(R) of the IUT.  
3) Decrementation of V(S) --> V(S) is equal to N(S) of the lost I frame.  
4) Expected event, receipt of a RR response:  
4.1) Receipt of RR response(F=1) with N(R) equal V(S) --> I frame was discarded.  
4.2) On T200 expiry in the IUT the IUT re-transmits a RR command (P=1).

Test Case Dynamic Behaviour						
<b>Test Case Name</b> : TC23S8401						
<b>Group</b> : LAPV5_DL/BV/S8_4/						
<b>Purpose</b> : On receipt of a RR command (P=1) the IUT shall send a RR response (F=1).						
<b>Configuration</b> :						
<b>Default</b> : DEF_DLL_BODY						
<b>Comments</b> : Ref: ETS 300 324–1 [1], subclause 10.4.11.2						
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments	
1	B1	+Preamble_state_84	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		1)	
2		PHL ! ph_data_req (R_FLAG:=FALSE) START T200_max				
3		REPEAT LTS_RR_rsp_or_cmd UNTIL [R_FLAG]				2
4		+Postamble_DLL  LTS_RR_rsp_or_cmd				
5		PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	2.2	
6		PHL ? ph_data_ind (R_FLAG:=FALSE)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		2.2	
<b>Detailed Comments</b> : 1) RR command (P=1) 2) Expected event, receipt of a RR response: 2.1) Receipt RR response (F=1). 2.2) On T200 expiry in the IUT the IUT re-transmits a RR command (P=1).						

## Test Case Dynamic Behaviour

Test Case Name : TC23S8402

Group : LAPV5\_DL/BV/S8\_4/

Purpose : After having sent an I frame, on receipt of a RR response (F=1) the IUT shall enter state 7.0.

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+LTS_pre_step			
2		+LTS_lcmd_or_RRcmd			1
3		+STEP_LAPV5DL_80_84			2
4		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))		4
5		+STEP_CHECK_STATE_70			5
6		+Postamble_DLL			
		LTS_pre_step			
7		+Preamble_state_70			
8		+STEP_nwk_com_ctrl_vid_lt1			a
9		START T_AC_short			
10		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short, START T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		b
		LTS_lcmd_or_RRcmd			
11		PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		
12		PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		

**Detailed Comments :** 1) On T200 time out the IUT shall re-transmit the last I frame (P=1) or it shall send a RR command (P=1), new state 8.0.  
 2) New state 8.4.  
 3) Incrementing of V(R) to acknowledge the last received I-frame.  
 4) Sending of RR response (F=1).  
 5) Expected status, the IUT shall be in state 7.0

LTS\_pre\_step: a) Sending of I frame(Common control(variant & interface ID)).  
 b) Receipt of I frame (P=0, Common Control ack).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S8403					
<b>Group</b> : LAPV5_DL/BV/S8_4/					
<b>Purpose</b> : nAfter having sent an I frame, on receipt of a REJ command (P=1) the IUT shall send a RR response (F=1).					
NOTE: This test is only applicable if the IUT re-sends in case of a T200 expiry the last sent I-frame as a REJ message is a valid response to an I-frame but not to a RR-command.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+LTS_pre_step	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))	(PASS)	1
2		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T200_max			
3		+STEP_LAPV5DL_80_84			2
4		PHL ! ph_data_req (R_FLAG:=FALSE) START T200_max			3
5		REPEAT LTS_RR_rsp_or_I_cmd UNTIL [R_FLAG]			4
6		+Postamble_DLL			
		LTS_RR_rsp_or_I_cmd			
7		PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max			4.1
8		PHL ? ph_data_ind (R_FLAG:=FALSE)			4.2
		LTS_pre_step			
9		+Preamble_state_70			
10		+STEP_nwk_com_ctrl_vid_lt1			a
11		START T_AC_short			
12		PHL ? ph_data_ind CANCEL T_AC_short, START T200_max			b
					Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack(TSC_NWK_CFI_VID)))
<b>Detailed Comments</b> : 1) On T200 expiry the IUT shall re-transmit the I frame (P=1, Common control ack) last sent. New state 8.0.					

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Test Case Dynamic Behaviour
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<b>Detailed Comments :</b> ...
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| <ul style="list-style-type: none"><li>2) State transition from state 8.0 to state 8.4.</li><li>3) Sending of REJ command (P=1).</li><li>4) Expected event, receipt of an RR response:<ul style="list-style-type: none"><li>4.1) Receipt of RR response (F=1) with N(R) equal V(S), requesting a re-transmission of the los I frame.</li><li>4.2) On T200 expiry in the IUT the IUT re-transmits an I frame (P=1).</li></ul></li></ul> |
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LTS_pre_step: a) Sending of I frame(Common control(variant & interface ID)). b) Receipt of I frame (P=0, Common Control ack).
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Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S8404 <b>Group</b> : LAPV5_DL/BV/S8_4/ <b>Purpose</b> : On receipt of a REJ response (F=1) the IUT shall re-transmit the I frame with the sequence number N(S) = N(R).  NOTE: This test is only applicable if the IUT re-sends in case of a T200 expiry the last sent I-frame as a REJ message is a valid response to an I-frame but not to a RR-command.  <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+LTS_pre_step	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))	(PASS)	1
2		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T200_max			
3		+STEP_LAPV5DL_80_84			2
4		PHL ! ph_data_req START T_AC_short			3
5		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short			4
6		PHL ! ph_data_req			
7		+Postamble_DLL			
8		LTS_pre_step			
9		+Preamble_state_70			
10		+STEP_nwk_com_ctrl_vid_lt1			a
11		START T_AC_short			
		PHL ? ph_data_ind CANCEL T_AC_short, START T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		b
<b>Detailed Comments</b> : 1) On T200 expiry the IUT shall re-transmit the I frame (P=1, Common control ack) last sent. New state 8.0. 2) State transition from state 8.0 to state 8.4. 3) Sending of a REJ response (F=1), requesting the re-transmission of the I frame last sent.					

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### Test Case Dynamic Behaviour

**Detailed Comments :** ...

New state 7.0.

4) Expected event, re-transmission of the I frame (P=0, Common control ack).

LTS\_pre\_step: a) Sending of I frame(Common control(variant &amp; interface ID)).

b) Receipt of I frame (P=0, Common Control ack) --&gt; (P=0) proves that the IUT is in state 7.1.

### Test Case Dynamic Behaviour

**Test Case Name :** TC23S8405**Group :** LAPV5\_DL/BV/S8\_4/**Purpose :** On receipt of a RNR command (P=1) the IUT shall send a RR response (F=1).**Configuration :****Default :** DEF\_DLL\_BODY**Comments :** Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_84	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		1
2		PHL ! ph_data_req (R_FLAG:=FALSE) START T200_max			
3		REPEAT LTS_RR_rsp_or_cmd UNTIL [R_FLAG]			2
4		+Postamble_DLL  LTS_RR_rsp_or_cmd			
5		PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	2.2
6		PHL ? ph_data_ind (R_FLAG:=FALSE)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		2.2

**Detailed Comments :** 1) Sending of a RNR command(P=1).

2) Expected event, receipt of a RR response:

2.1) Receipt RR response (F=1).

2.2) On T200 expiry in the IUT the IUT re-transmits a RR command (P=1).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S8406 <b>Group</b> : LAPV5_DL/BV/S8_4/ <b>Purpose</b> : After having sent an I frame, on receipt of a RNR response (F=1) the IUT shall enter state 7.4. <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+LTS_pre_step			
2		+LTS_lcmd_or_RRcmd			1
3		+STEP_LAPV5DL_80_84			2
4		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))		3
5		+STEP_CHECK_STATE_74			4
6		+Postamble_DLL			
		LTS_pre_step			
7		+Preamble_state_70			
8		+STEP_nwk_com_ctrl_vid_lt1			a
9		START T_AC_short			
10		PHL ? ph_data_ind CANCEL T_AC_short, START T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		b
		LTS_lcmd_or_RRcmd			
11		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		
12		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		
<b>Detailed Comments</b> : 1) On T200 time out the IUT shall re-transmit the last I frame (P=1) or it shall send a RR command (P=1), new state 8.0. 2) State transition from state 8.0 to state 8.4. 3) Sending of RNR response (F=1). 4) CExpected status, the IUT shall be in state 7.4.  LTS_pre_step: a) Sending of I frame(Common control(variant & interface ID)). b) Receipt of an I frame (P=0, Common Control ack).					

### Test Case Dynamic Behaviour

**Test Case Name** : TC23S8501

**Group** : LAPV5\_DL/BV/S8\_5/

**Purpose** : On receipt of a RR command (P=1) the IUT shall send a RR response (F=1).

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1[1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_85	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		1)
2		PHL ! ph_data_req (R_FLAG:=FALSE) START T200_max			
3		REPEAT LTS_RR_rsp_or_cmd UNTIL [R_FLAG]			2
4		+Postamble_DLL			
5		LTS_RR_rsp_or_cmd	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	2.2
6		PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max			
		PHL ? ph_data_ind (R_FLAG:=FALSE)	Ph_data_ind( TSC_EF_ADDR_CTRL,DI_rr _cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		2.2

**Detailed Comments** : 1) RR command (P=1)

2) Expected event, receipt of a RR response:

2.1) Receipt RR response (F=1).

2.2) On T200 expiry in the IUT the IUT re-transmits a RR command (P=1).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S8502 <b>Group</b> : LAPV5_DL/BV/S8_5/ <b>Purpose</b> : On receipt of a REJ command (P=1) the IUT shall send a RR response (F=1). <p style="text-align: center;">NOTE: This test is only applicable if the IUT re-sends in case of a T200 expiry the last sent I-frame as a REJ message is a valid response to an I-frame but not to a RR-command.</p> <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1[1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+LTS_pre_step			
2		PHL ? ph_data_ind (R_FLAG:=FALSE, V_R:=V_R+1) CANCEL T200_max	Ph_data_ind(TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_com_ctrl_ack(TSC_NWK_CFI_VID)))		1
3		+STEP_LAPV5DL_80_81			2
4		+STEP_LAPV5DL_81_85			3
5		PHL ! ph_data_req (R_FLAG:=FALSE) START T200_max	Ph_data_req(TSC_EF_ADDR_CTRL, DI_rej_cmd(CR_1, TSC_V5DL_CTRL, P_1, V_R))		4
6		REPEAT LTS_RR_rsp_or_I_cmd UNTIL [R_FLAG]			5
7		+Postamble_DLL			
8	B1	LTS_RR_rsp_or_I_cmd PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max	Ph_data_ind(TSC_EF_ADDR_CTRL, DI_rr_rsp(CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	5.1
9		PHL ? ph_data_ind (R_FLAG:=FALSE)	Ph_data_ind(TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_info_any))		5.2
10		LTS_pre_step			
11		+Preamble_state_70			
12		+STEP_nwk_com_ctrl_vid_lt1			a
13		START T_AC_short PHL ? ph_data_ind CANCEL T_AC_short, START T200_max	Ph_data_ind(TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack(TSC_NWK_CFI_VID)))		b
<b>Detailed Comments</b> : 1) On T200 expiry the IUT shall re-transmit the I frame (P=1, Common control ack) last sent. New state 8.0.					

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Test Case Dynamic Behaviour
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<b>Detailed Comments :</b> ...
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| <ul style="list-style-type: none"><li>2) State transition from state 8.0 to state 8.1.</li><li>3) State transition from state 8.1 to state 8.5.</li><li>4) Sending of REJ command (P=1).</li><li>5) Expected event, receipt of an RR response:<ul style="list-style-type: none"><li>5.1) Receipt of RR response (F=1) with N(R) equal V(S).</li><li>5.2) On T200 expiry in the IUT the IUT re-transmits an I frame (P=1).</li></ul></li></ul> |
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<p>LTS_pre_step: a) Sending of I frame(Common control(variant &amp; interface ID)).</p> <p>b) Receipt of I frame (P=0, Common Control ack).</p>
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Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S8503 <b>Group</b> : LAPV5_DL/BV/S8_5/ <b>Purpose</b> : On receipt of a REJ response (F=1) the IUT shall re-send the I frame with the sequence number N(S) = N(R).  NOTE: This test is only applicable if the IUT re-sends in case of a T200 expiry the last sent I-frame as a REJ message is a valid response to an I-frame but not to a RR-command.  <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1[1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+LTS_pre_step	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))	(PASS)	1
2		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T200_max			
3		+STEP_LAPV5DL_80_81			2
4		+STEP_LAPV5DL_81_85			3
5		PHL ! ph_data_req START T_AC_short			4
6		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))	(PASS)	5
7		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))		
8		+Postamble_DLL			
9		LTS_pre_step			
10		+Preamble_state_70			
11		+STEP_nwk_com_ctrl_vid_lt1			a
12		START T_AC_short			
		PHL ? ph_data_ind CANCEL T_AC_short, START T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		b
<b>Detailed Comments</b> : 1) On T200 expiry the IUT shall re-transmit the I frame (P=1, Common control ack) last sent. New state 8.0. 2) State transition from state 8.0 to state 8.1.					

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Test Case Dynamic Behaviour
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<b>Detailed Comments :</b> ...
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- |  |
|--|
| <ul style="list-style-type: none"><li>3) State transition from state 8.1 to state 8.5.</li><li>4) Sending of a REJ response (F=1), requesting the re-transmission of the I frame last sent.<br/>New state 7.1.</li><li>5) Expected event, re-transmission of the I frame (P=0, Common control ack) --&gt;<br/>(P=0) proves that the IUT is in state 7.1.</li></ul> |
|--|

LTS_pre_step: a) Sending of I frame(Common control(variant & interface ID)). b) Receipt of I frame (P=0, Common Control ack).
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Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S8504 <b>Group</b> : LAPV5_DL/BV/S8_5/ <b>Purpose</b> : After having sent an I frame, on receipt of a RNR response (F=1) the IUT shall enter state 7.5. <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1[1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+LTS_pre_step			
2		+LTS_lcmd_or_RRcmd			1
3		+STEP_LAPV5DL_80_81			2
4		+STEP_LAPV5DL_81_85			3
5		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))		4
6		+STEP_CHECK_STATE_75			5
7		+Postamble_DLL			
8		LTS_pre_step			
9		+Preamble_state_70			
10		+STEP_nwk_com_ctrl_vid_lt1			a
11		START T_AC_short PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short, START T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		b
12		LTS_lcmd_or_RRcmd PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		
13		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		
<b>Detailed Comments</b> : 1) On T200 time out the IUT shall re-transmit the last I frame (P=1) or it shall send a RR command (P=1), new state 8.0. from state 8.0 to state 8.1.. 3) State transition from state 8.1 to state 8.5. 4) Sending of RNR response (F=1). 5) Expected status, the IUT shall be in state 7.5.  LTS_pre_step: a) Sending of I frame(Common control(variant & interface ID)). b) Receipt of an I frame (P=0, Common Control ack).					

### Test Case Dynamic Behaviour

**Test Case Name** : TC23S9\_01

**Group** : LAPV5\_DL/BV/S9/

**Purpose** : On receipt of a MDL\_CTRL (establish request) the IUT shall send a SABME frame (P=1).

NOTE: The System management of the IUT shall send a MDL\_CTRL message (establish request) to the IUT entity when the IUT is in state 9.

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_9	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	1
2		START T_AC_long			
3		PHL ? ph_data_ind (V_S:=0, V_R:=0, V_A:=0) CANCEL T_AC_long			
4		+Postamble_DLL			

**Detailed Comments** : 1) Expected event, receipt of a SABME command.

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC23S9_02					
<b>Group</b> : LAPV5_DL/BV/S9/					
<b>Purpose</b> : On receipt of a SABME frame (P=1) the IUT shall send a UA frame (F=1) and enter state 7.0.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324–1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_9	Ph_data_req( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_1, TSC_V5DL_CTRL, P_1))	(PASS)	1
2		PHL ! ph_data_req (V_S:=0, V_R:=0, V_A:=0,R_FLAG:=FALSE) START T200_max			
3		REPEAT LTS_UA_response UNTIL [R_FLAG]			2
4		+STEP_CHECK_STATE_70			3
5		+Postamble_DLL			
6		LTS_UA_response PHL ? ph_data_ind	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_ua_rsp(CR_1, TSC_V5DL_CTRL, F_1))		2.1
7		PHL ? ph_data_ind (R_FLAG:=FALSE)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))		2.2
8		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_ua_rsp(CR_0, TSC_V5DL_CTRL, F_1))		
9		?TIMEOUT T200_max (R_FLAG:=TRUE)			4
<b>Detailed Comments</b> : 1) Sending of a SABME command (P=1). 2) Expected event, receipt of a UA–response. 2.1) Receipt of a UA–respons (F=1). 2.2) Receipt and handling of a SABME command. 3) Expected status, the IUT shall be in state 7.0 4) Wait until T200_max to receive the UA and SABME					

### Test Case Dynamic Behaviour

**Test Case Name** : TC23S9\_03

**Group** : LAPV5\_DL/BV/S9/

**Purpose** : On receipt of a DM frame (F=0) the IUT shall send a SABME frame (P=1).

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_9	Ph_data_req( TSC_EF_ADDR_CTRL, DI_dm_rsp( CR_0, TSC_V5DL_CTRL, F_0))	(PASS)	1
2		PHL ! ph_data_req START T_AC_short			
3		PHL ? ph_data_ind CANCEL T_AC_short			2
4		+Postamble_DLL			
<b>Detailed Comments :</b> 1) Sending of DM response (F=0) 2) Expected event, receipt of a SABME-command (P=1).					

### Test Case Dynamic Behaviour

**Test Case Name** : TC24S7001

**Group** : LAPV5\_DL/BO/S7\_0/

**Purpose** : On receipt of a SABME frame (P=1) the IUT shall send an UA frame (F=1) .

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_1, TSC_V5DL_CTRL, P_1))	(PASS)	1
2		PHL ! ph_data_req (V_S:=0, V_R:=0, V_A:=0) START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+Postamble_DLL			
Detailed Comments : 1) Sending of a SABME command (P=1). 2) Expected event, receipt of an UA-respons (F=1).					

Test Case Dynamic Behaviour						
<b>Test Case Name</b> : TC24S7002						
<b>Group</b> : LAPV5_DL/BO/S7_0/						
<b>Purpose</b> : On receipt of a DM frame (F=0) the IUT shall send a SABME frame (P=1).						
<b>Configuration</b> :						
<b>Default</b> : DEF_DLL_BODY						
<b>Comments</b> : Ref: ETS 300 324–1 [1], subclause 10.4.11.2.						
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments	
1	B1	+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_CTRL, DI_dm_rsp( CR_0, TSC_V5DL_CTRL, F_0))	(PASS)	1	
2		PHL ! ph_data_req START T_AC_short				
3		PHL ? ph_data_ind CANCEL T_AC_short			Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	2
4		+Postamble_DLL				
<b>Detailed Comments</b> : 1) Sending of a DM response (F=0). 2) Expected event, receipt of a SABME–command (P=1).						

## Test Case Dynamic Behaviour

Test Case Name : TC24S7003

Group : LAPV5\_DL/BO/S7\_0/

Purpose : On receipt of a RR response (F=1, instead of F=0) the I frame exchange shall not be affected.

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_70			
2		+STEP_nwk_com_ctrl_req_vid			
3		START T_AC_short			
4		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_REQ_VID)))		1
5		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))		2
6		+LTS_nwk_com_ctrl_vid			3
7		+Postamble_DLL			
		LTS_nwk_com_ctrl_vid			
8		START T_AC_short			
9		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_vid))		a
10		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_com_ctrl_ack(TSC_NWK_CFI_VID)))		b
11	B1	PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_0, V_S))	(PASS)	1

**Detailed Comments :** 1) Receipt of an I-command (P=0)  
 2) Sending of a RR response (F=1) instead of (F=0).  
 3) Check that I frame exchange is not affected.

LTS\_nwk\_com\_ctrl\_vid

a) Receive Common ctrl (variant &amp; interface ID)

b) Sending of an I frame(Common ctrl ack) (P=0).

c) Expected event, receipt of a RR response (F=0).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC24S7004					
<b>Group</b> : LAPV5_DL/BO/S7_0/					
<b>Purpose</b> : On receipt of a REJ response (F=1, instead of F=0) the I frame with the sequence number N(S) = N(R) shall be re-transmitted.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))	(PASS)	1
2		+STEP_nwk_com_ctrl_vid_lt1			
3		START T_AC_short			
4		PHL ? ph_data_ind CANCEL T_AC_short			
5		PHL ! ph_data_req START T_AC_short			2
6		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short			3
7		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Receipt of an I frame (P=0). 2) Sending of a REJ response (F=1) instead of (F=0). 3) Expected event, re-transmission of the I frame (P=0) with V(S) equal V(R).					

## Test Case Dynamic Behaviour

Test Case Name : TC24S7005

Group : LAPV5\_DL/BO/S7\_0/

Purpose : On receipt of a RNR response (F=1, instead of F=0) the IUT shall enter state 7.4.

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_70			
2		+STEP_nwk_com_ctrl_vid_lt1			
3		START T_AC_short			
4		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		1
5		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))		2
6		+STEP_CHECK_STATE_74			3
7		+Postamble_DLL			

Detailed Comments : 1) Receipt of an I frame (P=0).  
 2) Sending of a RR response (F=1) instead of (F=0).  
 3) Expected status, the IUT shall remain in state 7.4.

## Test Case Dynamic Behaviour

Test Case Name : TC24S7101

Group : LAPV5\_DL/BO/S7\_1/

Purpose : On receipt of a SABME frame (P=1) the IUT shall send an UA frame (F=1).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_71			
2		PHL ! ph_data_req (V_S:=0, V_R:=0, V_A:=0) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_1, TSC_V5DL_CTRL, P_1))		1
3	B1	PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_ua_rsp(CR_1, TSC_V5DL_CTRL, F_1))	(PASS)	2
4		+Postamble_DLL			

Detailed Comments : 1) Sending of a SABME-command (P=1).  
 2) Expected event, receipt of an UA-respons (F=1).



Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC24S7102 <b>Group</b> : LAPV5_DL/BO/S7_1/ <b>Purpose</b> : On receipt of a RNR response (F=1, instead of F=0) the IUT shall enter state 7.5. <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+LTS_pre_step			
2		(V_R:=V_R+1)			
3		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))		1
4		+STEP_CHECK_STATE_75			2
5		+Postamble_DLL			
		LTS_pre_step			
6		+Preamble_state_70			
7		+STEP_nwk_com_ctrl_vid_l1			a
8		START T_AC_short			
9		PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack(TSC_NW K_CFI_VID)))		b
10		+STEP_LAPV5DL_70_71			c
<b>Detailed Comments</b> : 1) Sending of a RNR response (F=1) as a response to the received I frame (P=0). 2) Expected status, the IUT shall be in state 7.5.  LTS_pre_step: a) Sending of I frame(Common control(variant & interface ID)). b) Receipt of I frame (P=0, Common Control ack). c) The IUT is brought into state 7.1					

### Test Case Dynamic Behaviour

**Test Case Name** : TC24S7401

**Group** : LAPV5\_DL/BO/S7\_4/

**Purpose** : On receipt of a DM frame (F=0) the IUT shall send a SABME frame (P=1).

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_74	Ph_data_req( TSC_EF_ADDR_CTRL, DI_dm_rsp( CR_0, TSC_V5DL_CTRL, F_0))	(PASS)	1
2		PHL ! ph_data_req START T_AC_short			
3		PHL ? ph_data_ind CANCEL T_AC_short			2
4		+Postamble_DLL			

**Detailed Comments** : 1) Sending of a DM response (F=0).

2) Expected event, receipt of a SABME-command (P=1).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC24S7402					
<b>Group</b> : LAPV5_DL/BO/S7_4/					
<b>Purpose</b> : On receipt of a REJ response (F=1, instead of F=0) the IUT shall re-transmit the I frame with the sequence number N(S) = N(R) of the REJ response sent.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+LTS_pre_step	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rej_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))  Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))	(PASS)	1
2		PHL ! ph_data_req START T_AC_short			
3		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short			2
4		+Postamble_DLL			
		LTS_pre_step			
5		+Preamble_state_70			
6		+STEP_nwk_com_ctrl_vid_lt1			a
7		START T_AC_short			
8		PHL ? ph_data_ind CANCEL T_AC_short			b
9		+STEP_LAPV5DL_70_74			c
<b>Detailed Comments</b> : 1) Sending of a REJ response (F=1) as a response to the received I frame (P=0). 2) Expected event, re-transmission of the I frame with N(S)=N(R) of the REJ response sent.  LTS_pre_step: a) Sending of I frame(Common control(variant & interface ID)). b) Receipt of I frame (P=0, Common Control ack). c) The IUT is brought into state 7.4					

## Test Case Dynamic Behaviour

Test Case Name : TC24S7403

Group : LAPV5\_DL/BO/S7\_4/

Purpose : On receipt of a RNR response (F=1, instead of F=0) the IUT shall remain in state 7.4.

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+LTS_pre_step			
2		(V_R:=V_R+1)			1
3		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))		1
4		+STEP_CHECK_STATE_74			2
5		+Postamble_DLL			
		LTS_pre_step			
6		+Preamble_state_70			
7		+STEP_nwk_com_ctrl_vid_lt1			a
8		START T_AC_short			
9		PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		b
10		+STEP_LAPV5DL_70_74			c

**Detailed Comments :** 1) Sending of a RNR response (F=1) as a response to the received I frame (P=0) (V\_R is set to the correct value)

2) Expected status, the IUT shall remain in state 7.4.

LTS\_pre\_step: a) Sending of I frame(Common control(variant & interface ID)).

b) Receipt of I frame (P=0, Common Control ack), V\_R is not incremented, otherwise the I-frame would be acknowledged in the following step STEP\_LAPV5DL\_70\_74.

c) The IUT is brought into state 7.4

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC24S8001					
<b>Group</b> : LAPV5_DL/BO/S8_0/					
<b>Purpose</b> : On receipt of a SABME frame (P=1) the IUT shall send an UA frame (F=1).					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_80	Ph_data_req( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_1, TSC_V5DL_CTRL, P_1))	(PASS)	1
2		PHL ! ph_data_req (V_S:=0, V_R:=0, V_A:=0) START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			
4		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of a SABME-command (P=1). 2) Expected event, receipt of an UA-respons (F=1).					

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC24S8002 <b>Group</b> : LAPV5_DL/BO/S8_0/ <b>Purpose</b> : On receipt of a DM frame (F=1) the IUT shall send a SABME frame (P=1). <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324–1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_80	Ph_data_req( TSC_EF_ADDR_CTRL, DI_dm_rsp( CR_0, TSC_V5DL_CTRL, F_1))	(PASS)	1
2		PHL ! ph_data_req START T_AC_short			
3		PHL ? ph_data_ind CANCEL T_AC_short			
4		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of a DM response (F=1). 2) Expected event, receipt of a SABME–command (P=1).					

### Test Case Dynamic Behaviour

**Test Case Name** : TC25S7001

**Group** : LAPV5\_DL/BI/S7\_0/

**Purpose** : On receipt of a RR command (P=1) with a N(R) error the IUT shall send a RR response (F=1) followed by a SABME frame (P=1).

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_70			
2		(V_R:=V_R+1)			1
3		PHL ! ph_data_req START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		2
4	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	3
5	B2	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	4
6		+Postamble_DLL			

**Detailed Comments** :

- 1) Incrementing of V(R).
- 2) Sending of a RR command with a N(R) error.
- 3) Expected event, receipt of a RR response (F=1).
- 4) Expected event, receipt of a SABME frame (P=1).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC25S7002					
<b>Group</b> : LAPV5_DL/BI/S7_0/					
<b>Purpose</b> : On receipt of a RR command (P=0) with a N(R) error the IUT shall send a SABME frame (P=1).					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_1, TSC_V5DL_CTRL, P_0, V_R))  Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	1
2		(V_R:=V_R+1)			2
3		PHL ! ph_data_req START T200_max			
4		PHL ? ph_data_ind CANCEL T200_max			3
5		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Incrementing of V(R). 2) Sending of a RR command with a N(R) error. 3) Expected event, receipt of a SABME frame (P=1).					

## Test Case Dynamic Behaviour

Test Case Name : TC25S7003

Group : LAPV5\_DL/BI/S7\_0/

Purpose : On receipt of a RR response (F=0) with a N(R) error the IUT shall send a SABME frame (P=1).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_70			
2		+STEP_nwk_com_ctrl_vid_lt1			
3		START T_AC_short			
4		PHL ? ph_data_ind (V_R:=V_R+2) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		1
5		PHL ! ph_data_req START T_AC_short	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_0, V_R))		2
6	B1	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	3
7		+Postamble_DLL			

Detailed Comments : 1) Receipt of an I-command (P=0), V(R) is incremented by 2.  
 2) Sending of a RR response (F=0) with a N(R) error.  
 3) Expected event, receipt of a SABME frame (P=1).



Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC25S7004 <b>Group</b> : LAPV5_DL/BI/S7_0/ <b>Purpose</b> : On receipt of a REJ command (P=1) with a N(R) error the IUT shall send a RR response (F=1) followed by a SABME frame (P=1). <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_70			
2		+STEP_nwk_com_ctrl_vid_lt1			
3		START T_AC_short			
4		PHL ? ph_data_ind (V_R:=V_R+2) CANCEL T_AC_short	Ph_data_ind(TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack(TSC_NWK_CFI_VID)))		1
5		PHL ! ph_data_req START T200_max	Ph_data_req(TSC_EF_ADDR_CTRL, DI_rej_cmd(CR_1, TSC_V5DL_CTRL, P_1, V_R))		2
6	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind(TSC_EF_ADDR_CTRL, DI_rr_rsp(CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	3
7	B2	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind(TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	4
8		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Receipt of an I-command (P=0), V(R) is incremented by 2. 2) Sending of a REJ command (P=1) with a N(R) error. 3) Expected event, receipt of a RR response (F=1). 4) Expected event, receipt of a SABME frame (P=1).					

## Test Case Dynamic Behaviour

Test Case Name : TC25S7005

Group : LAPV5\_DL/BI/S7\_0/

Purpose : On receipt of a REJ command (P=0) with a N(R) error the IUT shall send a SABME frame (P=1).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_70			
2		+STEP_nwk_com_ctrl_vid_lt1			
3		START T_AC_short			
4		PHL ? ph_data_ind (V_R:=V_R+2) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		1
5		PHL ! ph_data_req START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rej_cmd( CR_1, TSC_V5DL_CTRL, P_0, V_R))		2
6	B1	PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	3
7		+Postamble_DLL			

Detailed Comments : 1) Receipt of an I-command (P=0), V(R) is incremented by 2.  
 2) Sending of a REJ command (P=0) with a N(R) error.  
 3) Expected event, receipt of a SABME frame (P=1).

Test Case Dynamic Behaviour						
<b>Test Case Name</b> : TC25S7006						
<b>Group</b> : LAPV5_DL/BI/S7_0/						
<b>Purpose</b> : On receipt of a REJ response (F=0) with a N(R) error the IUT shall send a SABME frame (P=1).						
<b>Configuration</b> :						
<b>Default</b> : DEF_DLL_BODY						
<b>Comments</b> : Ref: ETS 300 324–1 [1], subclause 10.4.11.2						
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments	
1	B1	+Preamble_state_70	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))	(PASS)	1	
2		+STEP_nwk_com_ctrl_vid_lt1				
3		START T_AC_short				
4		PHL ? ph_data_ind (V_R:=V_R+2) CANCEL T_AC_short				
5		PHL ! ph_data_req START T_AC_short			Ph_data_req( TSC_EF_ADDR_CTRL, DI_rej_rsp( CR_0, TSC_V5DL_CTRL, F_0, V_R))	2
6		PHL ? ph_data_ind CANCEL T_AC_short			Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	3
7		+Postamble_DLL				
<b>Detailed Comments</b> : 1) Receipt of an I–command (P=0), V(R) is incremented by 2. 2) Sending of a REJ response (F=0) with a N(R) error. 3) Expected event, receipt of a SABME frame (P=1).						

## Test Case Dynamic Behaviour

Test Case Name : TC25S7007

Group : LAPV5\_DL/BI/S7\_0/

Purpose : On receipt of a RNR command (P=1) with a N(R) error the IUT shall send a RR response (F=1) followed by a SABME frame (P=1).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_70			
2		(V_R:=V_R+1)			1
3		PHL ! ph_data_req START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		2
4	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	3
5	B2	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	4
6		+Postamble_DLL			

**Detailed Comments :** 1) Incrementing of V(R).  
 2) Sending of a RNR command with a N(R) error.  
 3) Expected event, receipt of a RR response (F=1).  
 4) Expected event, receipt of a SABME frame (P=1).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC25S7008					
<b>Group</b> : LAPV5_DL/BI/S7_0/					
<b>Purpose</b> : On receipt of a RNR command (P=0) with a N(R) error the IUT shall send a SABME frame (P=1).					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324–1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_cmd( CR_1, TSC_V5DL_CTRL, P_0, V_R))  Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	1
2		(V_R:=V_R+1)			2
3		PHL ! ph_data_req START T200_max			
4		PHL ? ph_data_ind CANCEL T200_max			3
5		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Incrementing of V(R). 2) Sending of a RNR command with a N(R) error. 3) Expected event, receipt of a SABME frame (P=1).					

## Test Case Dynamic Behaviour

Test Case Name : TC25S7009

Group : LAPV5\_DL/BI/S7\_0/

Purpose : On receipt of a RNR response (F=0) with a N(R) error the IUT shall send a SABME frame (P=1).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_70			
2		+STEP_nwk_com_ctrl_vid_lt1			
3		START T_AC_short			
4		PHL ? ph_data_ind (V_R:=V_R+2) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		1
5		PHL ! ph_data_req START T_AC_short	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_rsp( CR_0, TSC_V5DL_CTRL, F_0, V_R))		2
6	B1	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	3
7		+Postamble_DLL			

Detailed Comments : 1) Receipt of an I-command (P=0), V(R) is incremented by 2.  
 2) Sending of a RNR response (F=0) with a N(R) error.  
 3) Expected event, receipt of a SABME frame (P=1).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC25S7010 <b>Group</b> : LAPV5_DL/BI/S7_0/ <b>Purpose</b> : On receipt of an I frame (P=1) with a N(R) error the IUT shall send a RR response (F=1) followed by a SABME frame (P=1). <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_70			
2		(V_R:=V_R+1)			1
3		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))		2
4	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	3
5	B2	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL,DI_s abme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	4
6		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Incrementing of V(R). 2) Sending of a I frame (P=1) with a N(R) error. 3) Expected event, receipt of a RR response (F=1). 4) Expected event, receipt of a SABME frame (P=1).					

### Test Case Dynamic Behaviour

**Test Case Name** : TC25S7011

**Group** : LAPV5\_DL/BI/S7\_0/

**Purpose** : On receipt of an I frame (P=0) with a N(R) error the IUT shall send a SABME frame (P=1).

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))	(PASS)	1 2
2		(V_R:=V_R+1)			
3		PHL ! ph_data_req (V_S:=V_S+1) START T_AC_short			
4		PHL ? ph_data_ind CANCEL T_AC_short			3
5		+Postamble_DLL			

**Detailed Comments** : 1) Incrementing of V(R).  
2) Sending of a I frame (P=0) with a N(R) error.  
3) Expected event, receipt of a SABME frame (P=1).



Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC25S7012 <b>Group</b> : LAPV5_DL/BI/S7_0/ <b>Purpose</b> : On receipt of an I frame (P=1) with N(S) not equal V(R) of the IUT and with a N(R) error the IUT shall discard the I frame and send a REJ response (F=1) followed by a SABME frame (P=1). <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))		1 2
2		(V_S:=V_S+1, V_R:=V_R+1)			
3		PHL ! ph_data_req (V_S:=V_S-1) START T200_max			
4	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rej_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	3
5	B2	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	4
6		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Incrementing of V(S) and V(R). 2) Sending of a I frame (P=1) with N(S) not equal V(R) of the IUT and with a N(R) error. 3) Expected event, receipt of a REJ response (F=1) with N(R) equal V(S). 4) Expected event, receipt of a SABME frame (P=1).					

## Test Case Dynamic Behaviour

Test Case Name : TC25S7013

Group : LAPV5\_DL/BI/S7\_0/

Purpose : On receipt of an I frame (P=0) with N(S) not equal V(R) of the IUT and with a N(R) error the IUT shall discard the I frame and send a REJ response (F=0) followed by a SABME frame (P=1).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_70			
2		(V_S:=V_S+1, V_R:=V_R+1)			1
3		PHL ! ph_data_req (V_S:=V_S-1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))		2
4	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rej_rsp( CR_1, TSC_V5DL_CTRL, F_0, V_S))	(PASS)	3
5	B2	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	4
6		+Postamble_DLL			

Detailed Comments : 1) Incrementing of V(S) and V(R).  
 2) Sending of a I frame (P=0) with N(S) not equal V(R) of the IUT and with a N(R) error.  
 3) Expected event, receipt of a REJ response (F=0) with N(R) equal V(S).  
 4) Expected event, receipt of a SABME frame (P=1).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC25S7014					
<b>Group</b> : LAPV5_DL/BI/S7_0/					
<b>Purpose</b> : On receipt of an I frame which contains an information field whose length exceeds the max. length of N201 octets the IUT shall send a SABME frame (P=1).					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324–1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_info_N201_plus))	(PASS)	1
2		PHL ! ph_data_req (V_S:=V_S+1) START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of an I frame which contains an information field whose length exceeds N201. 2) Expected event, receipt of a SABME frame (P=1).					

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC25S7015					
<b>Group</b> : LAPV5_DL/BI/S7_0/					
<b>Purpose</b> : On receipt of a frame which contains less than 4 octets the IUT shall discard the frame and not take any further action. Afterwards an I frame exchange shall be successful.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : ETS 300 324–1 [1], subclause 10.2.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_CTRL, BI_dl_rr_cmd_short( CR_1, TSC_V5DL_CTRL))	(PASS)	1
2		PHL ! ph_data_req START T_NOAC			
3		?TIMEOUT T_NOAC			2
4		+STEP_CHECK_I_frame_exchange			3
5		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of a frame which contains less than 4 octets, FCS + starting flag. 2) Expected event, no event shall occur during time T_NOAC. 3) Expected status, an I frame exchange shall be successful.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC25S7016

**Group** : LAPV5\_DL/BI/S7\_0/

**Purpose** : On receipt of an I frame (P=1) whose CR bit of the link address field is set to the response value (CR=0) instead of setting it to the command value, the IUT shall send an SABME frame (P=1).

(A CR error in an I frame transforms the I frame into an undifined frame regarding ETS 300 125 [8], subclause 3.6.1, table 5. The behavior on receipt of an undifined frame is described in ETS 300 125 [8], subcluse 5.8.5.

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2  
ETS 300 125 [8] , subclause 3.6.1 (table 5) and subclause 5.8.5

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_0, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_info))	(PASS)	1
2		PHL ! ph_data_req START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			2
4		+Postamble_DLL			

**Detailed Comments** : 1) Sending of an I frame (P=1) whose CR bit of the link address field is set to the response value (CR=0) instead of setting it to the command value.

2) Expected event, receipt of a SABME frame (P=1).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC25S7017					
<b>Group</b> : LAPV5_DL/BI/S7_0/					
<b>Purpose</b> : On receipt of an I frame whose link address field is not equal to two octets the IUT shall discard the frame and not take any further action. Afterwards an I frame exchange shall be successful.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : ETS 300 324–1 [1], subclause 10.2.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_CTRL, BI_dl_i_cmd_format_err( CR_1, V_S, P_1, V_R, Nwk_info))	(PASS)	1
2		PHL ! ph_data_req START T_NOAC			
3		?TIMEOUT T_NOAC			2
4		+STEP_CHECK_I_frame_exchange			3
5		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of an I frame whose V5DL address is to long. 2) Expected event, no event shall occur during time T_NOAC. 3) Expected status, an I frame exchange shall be successful.					

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC25S7018					
<b>Group</b> : LAPV5_DL/BI/S7_0/					
<b>Purpose</b> : On receipt of an I frame whose V5DL data link address is not supported by the IUT the IUT shall discard the frame and not take any further action. Afterwards an I frame exchange shall be successful.					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : ETS 300 324–1 [1], subclause 10.2.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_1, TSC_V5DL_INVALID, V_S, P_1, V_R, Nwk_info))	(PASS)	1
2		PHL ! ph_data_req START T_NOAC			
3		?TIMEOUT T_NOAC			2
4		+STEP_CHECK_I_frame_exchange			3
5		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Sending of an I frame whose V5DL address is not supported by the IUT. 2) Expected event, no event shall occur during time T_NOAC. 3) Expected status, an I frame exchange shall be successful.					

## Test Case Dynamic Behaviour

Test Case Name : TC25S7101

Group : LAPV5\_DL/BI/S7\_1/

Purpose : On receipt of an I frame (P=1) with a N(R) error the IUT shall discard the I frame and send a RR response (F=1) followed by a SABME frame (P=1).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_71			
2		(V_R:=V_R+1)			1
3		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))		2
4	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	3
5	B2	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	4
6		+Postamble_DLL			

Detailed Comments :

- 1) Incrementing of V(R).
- 2) Sending of a I frame (P=1) with a N(R) error.
- 3) Expected event, receipt of a RR response (F=1).
- 4) Expected event, receipt of a SABME frame (P=1).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC25S7102					
<b>Group</b> : LAPV5_DL/BI/S7_1/					
<b>Purpose</b> : On receipt of an I frame (P=0) with N(S) not equal V(R) of the IUT and with a N(R) error the IUT shall discard the I frame and send a SABME frame (P=1).					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324–1 [1], subclause 10.4.11.2.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_71	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))		1 2
2		(V_R:=V_R+1, V_S:=V_S+1)			
3		PHL ! ph_data_req START T200_max			
4		PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	3
5		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Incrementing of V(R) and V(S). 2) Sending of a I frame (P=0) with N(S) not equal V(R) of the IUT and with a N(R) error. 3) Expected event, receipt of a SABME frame (P=1).					

### Test Case Dynamic Behaviour

**Test Case Name** : TC25S7401

**Group** : LAPV5\_DL/BI/S7\_4/

**Purpose** : On receipt of a RR command (P=1) with a N(R) error the IUT shall send a RR response (F=1) followed by a SABME frame (P=1).

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_74			
2		(V_R:=V_R+1)			1
3		PHL ! ph_data_req START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		2
4	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	3
5	B2	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	4
6		+Postamble_DLL			

**Detailed Comments** : 1) Incrementing of V(R).  
 2) Sending of a RR command with a N(R) error.  
 3) Expected event, receipt of a RR response (F=1).  
 4) Expected event, receipt of a SABME frame (P=1).



Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC25S7402					
<b>Group</b> : LAPV5_DL/BI/S7_4/					
<b>Purpose</b> : On receipt of a REJ command (P=1) with a N(R) error the IUT shall send a RR response (F=1) followed by a SABME frame (P=1).					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324–1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+LTS_pre_step			
2		(V_R:=V_R+1)			1
3		PHL ! ph_data_req START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rej_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		2
4	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	3
5	B2	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	4
6		+Postamble_DLL			
		LTS_pre_step			
7		+Preamble_state_70			
8		+STEP_nwk_com_ctrl_vid_lt1			a
9		START T_AC_short			
10		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		b
11		+STEP_LAPV5DL_70_74			c
<b>Detailed Comments</b> : 1) Incrementing of V(R). 2) Sending of a REJ command (P=1) with a N(R) error. 3) Expected event, receipt of a RR response (F=1). 4) Expected event, receipt of a SABME frame (P=1).  LTS_pre_step: a) Sending of I frame(Common control(variant & interface ID)). b) Receipt of I frame (P=0, Common Control ack). c) The IUT is brought into state 7.4					

## Test Case Dynamic Behaviour

Test Case Name : TC25S7403

Group : LAPV5\_DL/BI/S7\_4/

Purpose : On receipt of a RNR command (P=1) with a N(R) error the IUT shall send a RR response (F=1) followed by a SABME frame (P=1).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_74			
2		(V_R:=V_R+1)			1
3		PHL ! ph_data_req START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		2
4	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	3
5	B2	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL,DI_s abme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	4
6		+Postamble_DLL			

**Detailed Comments :** 1) Incrementing of V(R).  
 2) Sending of a RNR command with a N(R) error.  
 3) Expected event, receipt of a RR response (F=1).  
 4) Expected event, receipt of a SABME frame (P=1).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC25S7404 <b>Group</b> : LAPV5_DL/BI/S7_4/ <b>Purpose</b> : On receipt of an I frame (P=1) with a N(R) error the IUT shall send a RR response (F=1) followed by a SABME frame (P=1). <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_74	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))		1 2
2		(V_R:=V_R+1)			
3		PHL ! ph_data_req (V_S:=V_S+1) START T200_max			
4	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	3
5	B2	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	4
6		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Incrementing of V(R). 2) Sending of a I frame (P=1) with a N(R) error. 3) Expected event, receipt of a RR response (F=1). 4) Expected event, receipt of a SABME frame (P=1).					

### Test Case Dynamic Behaviour

**Test Case Name** : TC25S8001

**Group** : LAPV5\_DL/BI/S8\_0/

**Purpose** : On receipt of a RR command (P=1) with a N(R) error the IUT shall send a RR response (F=1) followed by a SABME frame (P=1).

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_80			
2		(V_R:=V_R+1)			1
3		PHL ! ph_data_req START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		2
4	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	3
5	B2	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	4
6		+Postamble_DLL			

**Detailed Comments** :

- 1) Incrementing of V(R).
- 2) Sending of a RR command with a N(R) error.
- 3) Expected event, receipt of a RR response (F=1).
- 4) Expected event, receipt of a SABME frame (P=1).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC25S8002					
<b>Group</b> : LAPV5_DL/BI/S8_0/					
<b>Purpose</b> : On receipt of a RR command (P=0) with a N(R) error the IUT shall send a SABME frame (P=1).					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_80	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_1, TSC_V5DL_CTRL, P_0, V_R))  Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	1
2		(V_R:=V_R+1)			2
3		PHL ! ph_data_req START T200_max			
4		PHL ? ph_data_ind CANCEL T200_max			3
5		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Incrementing of V(R). 2) Sending of a RR command with a N(R) error. 3) Expected event, receipt of a SABME frame (P=1).					

### Test Case Dynamic Behaviour

**Test Case Name** : TC25S8003

**Group** : LAPV5\_DL/BI/S8\_0/

**Purpose** : On receipt of a REJ command (P=1) with a N(R) error the IUT shall send a RR response (F=1) followed by a SABME frame (P=1).

NOTE: This test is only applicable if the IUT re-sends in case of a T200 expiry the last sent I-frame as a REJ message is a valid response to an I-frame but not to a RR-command.

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+LTS_pre_step			
2		PHL ? ph_data_ind (V_R:=V_R+2) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		1
3		PHL ! ph_data_req START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rej_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		2
4	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	3
5	B2	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	4
6		+Postamble_DLL			
7		LTS_pre_step			
8		+Preamble_state_70			
9		+STEP_nwk_com_ctrl_vid_lt1			a
10		START T_AC_short PHL ? ph_data_ind CANCEL T_AC_short, START T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		b

**Detailed Comments** : 1) On T200 expiry the IUT shall re-transmit the I frame (P=1, Common control ack) last sent.  
New state 8.0. V(R) is incremented by 2.  
2) Sending of a REJ command (P=1) with a N(R) error.  
3) Expected event, receipt of a RR response (F=1).  
4) Expected event, receipt of a SABME frame (P=1).

LTS\_pre\_step: aa) Sending of I frame(Common control(variant & interface ID)).  
b) Receipt of I frame (P=0, Common Control ack).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC25S8004 <b>Group</b> : LAPV5_DL/BI/S8_0/ <b>Purpose</b> : On receipt of a RNR command (P=1) with a N(R) error the IUT shall send a RR response (F=1) followed by a SABME frame (P=1). <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_80	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		1 2
2		(V_R:=V_R+1)			
3		PHL ! ph_data_req START T200_max			
4	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	3
5	B2	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	4
6		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Incrementing of V(R). 2) Sending of a RNR command with a N(R) error. 3) Expected event, receipt of a RR response (F=1). 4) Expected event, receipt of a SABME frame (P=1).					

## Test Case Dynamic Behaviour

Test Case Name : TC25S8005

Group : LAPV5\_DL/BI/S8\_0/

Purpose : On receipt of an I frame (P=1) with a N(R) error the IUT shall send a RR response (F=1) followed by a SABME frame (P=1).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_80			
2		(V_R:=V_R+1)			1
3		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))		2
4	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	3
5	B2	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	4
6		+Postamble_DLL			

Detailed Comments :

- 1) Incrementing of V(R).
- 2) Sending of a I frame (P=1) with a N(R) error.
- 3) Expected event, receipt of a RR response (F=1).
- 4) Expected event, receipt of a SABME frame (P=1).



Test Case Dynamic Behaviour						
<b>Test Case Name</b> : TC25S8006						
<b>Group</b> : LAPV5_DL/BI/S8_0/						
<b>Purpose</b> : On receipt of an I frame (P=0) with a N(R) error the IUT shall send a SABME frame (P=1).						
<b>Configuration</b> :						
<b>Default</b> : DEF_DLL_BODY						
<b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2						
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments	
1	B1	+Preamble_state_80	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))	(PASS)	1	
2		(V_R:=V_R+1)				2
3		PHL ! ph_data_req (V_S:=V_S+1) START T_AC_short				
4		PHL ? ph_data_ind CANCEL T_AC_short			3	
5		+Postamble_DLL				
<b>Detailed Comments</b> : 1) Incrementing of V(R). 2) Sending of a I frame (P=0) with a N(R) error. 3) Expected event, receipt of a SABME frame (P=1).						

## Test Case Dynamic Behaviour

Test Case Name : TC25S8007

Group : LAPV5\_DL/BI/S8\_0/

Purpose : On receipt of an I frame (P=1) with N(S) not equal V(R) of the IUT and with a N(R) error the IUT shall discard the I frame and send a REJ response (F=1) followed by a SABME frame (P=1).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_80			
2		(V_S:=V_S+1, V_R:=V_R+1)			1
3		PHL ! ph_data_req (V_S:=V_S-1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))		2
4	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rej_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	3
5	B2	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	4
6		+Postamble_DLL			

Detailed Comments : 1) Incrementing of V(S) and V(R).  
 2) Sending of a I frame (P=1) with N(S) not equal V(R) of the IUT and with a N(R) error.  
 3) Expected event, receipt of a REJ response (F=1) with N(R) equal V(S).  
 4) Expected event, receipt of a SABME frame (P=1).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC25S8008 <b>Group</b> : LAPV5_DL/BI/S8_0/ <b>Purpose</b> : On receipt of an I frame (P=0) with N(S) not equal V(R) of the IUT and with a N(R) error the IUT shall discard the I frame and send a REJ response (F=0) followed by a SABME frame (P=1). <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_80	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))		1 2
2		(V_S:=V_S+1, V_R:=V_R+1)			
3		PHL ! ph_data_req (V_S:=V_S-1) START T200_max			
4	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rej_rsp( CR_1, TSC_V5DL_CTRL, F_0, V_S))	(PASS)	3
5	B2	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	4
6		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Incrementing of V(S) and V(R). 2) Sending of a I frame (P=0) with N(S) not equal V(R) of the IUT and with a N(R) error. 3) Expected event, receipt of a REJ response (F=0) with N(R) equal V(S). 4) Expected event, receipt of a SABME frame (P=1).					

## Test Case Dynamic Behaviour

Test Case Name : TC25S8101

Group : LAPV5\_DL/BI/S8\_1/

Purpose : On receipt of an I frame (P=1) with N(S) not equal V(R) of the IUT and with a N(R) error the IUT shall discard the I frame and send a RR response (F=1) followed by a SABME frame (P=1).

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_81			
2		(V_S:=V_S+1, V_R:=V_R+1)			1
3		PHL ! ph_data_req (V_S:=V_S-1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))		2
4	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	3
5	B2	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	4
6		+Postamble_DLL			

Detailed Comments : 1) Incrementing of V(S) and V(R).

2) Sending of a I frame (P=1) with N(S) not equal V(R) of the IUT and with a N(R) error.

3) Expected event, receipt of a RR response (F=1) with N(R) equal V(S).

4) Expected event, receipt of a SABME frame (P=1).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC25S8102					
<b>Group</b> : LAPV5_DL/BI/S8_1/					
<b>Purpose</b> : On receipt of an I frame (P=0) with N(S) not equal V(R) of the IUT and with a N(R) error the IUT shall discard the I frame and send a SABME frame (P=1).					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324–1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_81	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_ANY)))		1
2		(V_S:=V_S+1, V_R:=V_R+1)			2
3		PHL ! ph_data_req (V_S:=V_S–1) START T200_max			
4		PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	3
5		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Incrementing of V(S) and V(R). 2) Sending of a I frame (P=0) with N(S) not equal V(R) of the IUT and with a N(R) error. 3) Expected event, receipt of a SABME frame (P=1).					

## Test Case Dynamic Behaviour

Test Case Name : TC25S8401

Group : LAPV5\_DL/BI/S8\_4/

Purpose : On receipt of a REJ command (P=1) with a N(R) error the IUT shall send a RR response (F=1) followed by a SABME frame (P=1).

NOTE: This test is only applicable if the IUT re-sends in case of a T200 expiry the last sent I-frame as a REJ message is a valid response to an I-frame but not to a RR-command.

Configuration :

Default : DEF\_DLL\_BODY

Comments : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+LTS_pre_step			
2		PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		1
3		+STEP_LAPV5DL_80_84			2
4		(V_R:=V_R+2)			3
5		PHL ! ph_data_req START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rej_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		4
6	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	5
7	B2	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	6
8		+Postamble_DLL			
9		LTS_pre_step			
10		+Preamble_state_70			
11		+STEP_nwk_com_ctrl_vid_lt1			a
12		START T_AC_short			
		PHL ? ph_data_ind CANCEL T_AC_short, START T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		b

Detailed Comments : 1) On T200 expiry the IUT shall re-transmit the I frame (P=1, Common control ack) last sent.  
New state 8.0.  
2) New state 8.4.  
3) V(R) is incremented by 2.  
4) Sending of a REJ command (P=1) with a N(R) error.  
5) Expected event, receipt of a RR response (F=1).

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Test Case Dynamic Behaviour	
<p><b>Detailed Comments :</b> ...</p> <p>6) Expected event, receipt of a SABME frame (P=1).</p> <p>LTS_pre_step: a) Sending of I frame(Common control(variant &amp; interface ID)). b) Receipt of I frame (P=0, Common Control ack).</p>	

Test Case Dynamic Behaviour					
<p><b>Test Case Name :</b> TC25S8402</p> <p><b>Group :</b> LAPV5_DL/BI/S8_4/</p> <p><b>Purpose :</b> On receipt of a RNR command (P=1) with a N(R) error the IUT shall send a RR response (F=1) followed by a SABME frame (P=1).</p> <p><b>Configuration :</b></p> <p><b>Default :</b> DEF_DLL_BODY</p> <p><b>Comments :</b> Ref: ETS 300 324-1 [1], subclause 10.4.11.2</p>					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_84			1
2		(V_R:=V_R+1)			2
3		PHL ! ph_data_req START T200_max			
4	B1	PHL ? ph_data_ind CANCEL T200_max, START T_AC_short	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))  Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	3
5	B2	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	4
6		+Postamble_DLL			
<p><b>Detailed Comments :</b> 1) Incrementing of V(R). 2) Sending of a RNR command with a N(R) error. 3) Expected event, receipt of a RR response (F=1). 4) Expected event, receipt of a SABME frame (P=1).</p>					

### Test Case Dynamic Behaviour

**Test Case Name** : TC26S5001

**Group** : LAPV5\_DL/TI/S5\_0/

**Purpose** : On T200 expiry the IUT shall repeat the SABME frame (P=1).

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_50	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	1
2		START T200_max			
3		PHL ? ph_data_ind (V_S:=0, V_R:=0, V_A:=0) CANCEL T200_max			
4		+Postamble_DLL			

**Detailed Comments** : 1) Expected event, receipt of the re-transmit SABME frame (P=1).

### Test Case Dynamic Behaviour

**Test Case Name** : TC26S5002

**Group** : LAPV5\_DL/TI/S5\_0/

**Purpose** : On T200 expiry and R\_COUNTER=N200 the IUT shall return to state 9 and start the data link failure procedure (ETS 300 324-1 [1] AnnexC Clause 17).

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_50	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	1
2		(R_COUNTER:=0) START T200_max			
3		REPEAT LTS_SABME(R_COUNTER) UNTIL [R_COUNTER=(N200-1)]			
4		CANCEL T200_max, START T_AC_short			2
5		PHL ? ph_data_ind CANCEL T_AC_short			
6		+Postamble_DLL			
7		LTS_SABME(COUNTER:INTEGER) PHL ? ph_data_ind (COUNTER:=COUNTER+1) START T200_max			

**Detailed Comments** : 1) Expected event, 3 re-transmissions of the SABME frame (P=1).

Afterwards a system startup shall be initialized (not testable from outside).

2) Expected event, receipt of a SABME frame (P=1) after a successful system startup.  
(N200 repetitions).



Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC26S5101					
<b>Group</b> : LAPV5_DL/TI/S5_1/					
<b>Purpose</b> : On T200 expiry and R_COUNTER=N200 the IUT shall return to state 9 and start the data link failure procedure (ETS 300 324–1 [1] AnnexC Clause 17).					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324–1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_51	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	1
2		(R_COUNTER:=0) START T200_max			
3		REPEAT LTS_SABME(R_COUNTER) UNTIL [R_COUNTER=N200]			
4		CANCEL T200_max, START T_AC_short			2
5		PHL ? ph_data_ind CANCEL T_AC_short			
6		+Postamble_DLL			
7		LTS_SABME(COUNTER:INTEGER) PHL ? ph_data_ind (COUNTER:=COUNTER+1) START T200_max			
<b>Detailed Comments</b> : 1) Expected event, 3 re–transmissions of the SABME frame (P=1). Afterwards a system startup shall be initialized (not testable from outside). 2) Expected event, receipt of a SABME frame (P=1) after a successful system startup.					

### Test Case Dynamic Behaviour

**Test Case Name** : TC26S7001

**Group** : LAPV5\_DL/TI/S7\_0/

**Purpose** : On T200 expiry the IUT shall re-send the last I frame (P=1).  
The repeated I frame shall be received during the time period between the expiry of T200\_min and T200\_max.

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+Preamble_state_70			
2		+STEP_nwk_com_ctrl_vid_lt1			
3		START T_AC_short			
4		PHL ? ph_data_ind CANCEL T_AC_short, START T200_min, START T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		1
5		?TIMEOUT T200_min			2
6		+LTS_I_frame_or_RR_command			3
7		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))		
8		+Postamble_DLL  LTS_I_frame_or_RR_command			
9	B1	PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_1, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))	(PASS)	3
10	B2	PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))	(PASS)	3

**Detailed Comments** : 1) Receipt of an I frame (P=0, Common control ack), no response to the I frame is sent.  
2) Expiry of T200\_min --> minimum guard time before I frame repetition.  
3) Expected event, on T200 expiry, receipt of a re-sent I frame (P=1, Common ctrl ack) or a RR command (P=1).

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC26S7002 <b>Group</b> : LAPV5_DL/TI/S7_0/ <b>Purpose</b> : On T203 expiry the IUT shall send a RR command (P=1). The RR command shall be received during the time period between the expiry of T203_min and T203_max. <b>Configuration</b> : <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 324-1 [1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_70	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))	(PASS)	1
2		+LTS_Initialize_T203			2
3		?TIMEOUT T203_min			3
4		PHL ? ph_data_ind CANCEL T203_max			
5		+Postamble_DLL			
6		LTS_Initialize_T203			
7		PHL ! ph_data_req START T200_max			
		PHL ? ph_data_ind CANCEL T200_max, START T203_min, START T203_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))		
<b>Detailed Comments</b> : 1) Initialization of T203. 2) Expiry of T203_min --> minimum guard time before polling with a RR command. 3) Expected event, on T203 expiry, receipt of a RR command (P=1).					

### Test Case Dynamic Behaviour

**Test Case Name** : TC26S7401

**Group** : LAPV5\_DL/TI/S7\_4/

**Purpose** : On T200 expiry the IUT shall send a RR command (P=1).

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1 [1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_74	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))	(PASS)	1
2		START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			
4		+Postamble_DLL			

**Detailed Comments** : 1) Expected event, receipt of a RR command (P=1).

### Test Case Dynamic Behaviour

**Test Case Name** : TC26S8001

**Group** : LAPV5\_DL/TI/S8\_0/

**Purpose** : On T200 expiry and R\_COUNTER=N200 the IUT shall send a SABME frame (P=1).

**Configuration** :

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 324-1[1], subclause 10.4.11.2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_80	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))	(PASS)	1
2		(R_COUNTER:=0) START T200_max			
3		REPEAT LTS_RR_command(R_COUNTER) UNTIL [R_COUNTER=N200]			
4		CANCEL T200_max, START T_AC_short			2
5		PHL ? ph_data_ind (V_S:=0, V_R:=0, V_A:=0) CANCEL T_AC_short			
6		+Postamble_DLL			
7		LTS_RR_command(COUNTER:INTEGER) PHL ? ph_data_ind (COUNTER:=COUNTER+1) START T200_max			

**Detailed Comments** : 1) Expected event, three receipt of a RR command (P=1).

2) Expected event, receipt of a SABME-command (P=1)

Test Case Dynamic Behaviour					
<b>Test Case Name</b> : TC26S8401					
<b>Group</b> : LAPV5_DL/TI/S8_4/					
<b>Purpose</b> : On T200 expiry the IUT shall send a RR command (P=1).					
<b>Configuration</b> :					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 324–1[1], subclause 10.4.11.2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	+Preamble_state_84	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))	(PASS)	1
2		START T200_max			
3		PHL ? ph_data_ind CANCEL T200_max			
4		+Postamble_DLL			
<b>Detailed Comments</b> : 1) Expected event, receipt of a RR command (P=1).					

## Test Step Dynamic Behaviour

Test Step Name : STEP\_START\_UP\_DL

Group : state\_transitions/V5\_interface\_startup/

Objective : Initialisation of the IUT, the initial state is 7.0.

Default : DEF\_DLL\_PRE

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		(R_FLAG:=FALSE) START T_AC_short, START T_AC_long			
2		REPEAT LTS_SABM_cmd UNTIL [R_FLAG]			1
3		PHL ! ph_data_req (R_FLAG:=FALSE)	Ph_data_req( TSC_EF_ADDR_CTRL, DI_ua_rsp(CR_0, TSC_V5DL_CTRL, F_1))		2
4		START T_START_UP			
5		REPEAT LTS_START_UP_POLL UNTIL [R_FLAG]			3
6	TS0	LTS_SABM_cmd PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T_AC_short, CANCEL T_AC_long	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))		
7	TS1	?TIMEOUT T_AC_long		INCONC	
8	TS2	?TIMEOUT T_AC_short			
9		PHL ! ph_data_req START T_AC_short	Ph_data_req( TSC_EF_ADDR_CTRL, DI_dm_rsp( CR_0, TSC_V5DL_CTRL, F_0))		
10	TS3	PHL ? OTHERWISE LTS_START_UP_POLL			
11	TS4	PHL ? ph_data_ind (V_R:=V_R+1, R_FLAG:=FALSE) CANCEL T_AC_long, START T_START_UP	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_req_vid))		a
12		+STEP_START_UP_VID			
13	TS6	PHL ? ph_data_ind (V_R:=V_R+1, R_FLAG:=FALSE) START T_START_UP	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_restart_req))		c
14		+STEP_START_UP_RESTART			
15	TS7	PHL ? ph_data_ind (R_FLAG:=FALSE) START T_START_UP	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))		d
16		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_ua_rsp(CR_0, TSC_V5DL_CTRL, F_1))		

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Test Step Dynamic Behaviour					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
17	TS8	PHL ? ph_data_ind (R_FLAG:=FALSE)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		e
18		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))		
19		PHL ? ph_data_ind	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))		
20	TS9	PHL ? ph_data_ind (V_R:=V_R+1)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_port_ctrl( TSC_NWK_CFE_UNBLOCK, TSPX_USERPORT_L3_AD DR_PSTN)))		b
21		PHL ! ph_data_req (V_S:=V_S+1)	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_port_ctrl_ack(TSC_NW K_CFE_UNBLOCK,TSPX_U SERPORT_L3_ADDR_PST N)))		
22	TS10	PHL ? ph_data_ind (V_R:=V_R+1)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_port_ctrl( TSC_NWK_CFE_UNBLOCK, TSPX_USERPORT_L3_AD DR_ISDN)))		b
23		PHL ! ph_data_req (V_S:=V_S+1)	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_port_ctrl_ack(TSC_NW K_CFE_UNBLOCK,TSPX_U SERPORT_L3_ADDR_ISDN )))		
24	TS12	?TIMEOUT T_START_UP (R_FLAG:=TRUE)			f

Continued on next page

*Continued from previous page***Test Step Dynamic Behaviour**

**Detailed Comments :** 1) Receipt of a SABME frame (P=1) (SABME is polled by sending of DM response (P=0) messages.  
2) Sending of an UA frame.  
3) Polling of possible start-up procedures

**LTS\_START\_UP\_POLL**

- a) Receipt of a COMMON CONTROL message (cfi: variant & interface ID).  
The start of the variant & interface ID procedure.
- b) Unblocking of the user port(s).
- c) Receipt of a COMMON CONTROL message (cfi: restart req). The restart procedure is initialized.
- d) Receipt of a SABME command.
- e) Receipt of a RR command.
- f) Expiry of T\_VID\_start\_up (R\_FLAG2 is set)



Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STEP_START_UP_DL_BODY <b>Group</b> : state_transitions/V5_interface_startup/ <b>Objective</b> : Initialisation of the IUT, the initial state is 7.0. <b>Default</b> : DEF_DLL_BODY <b>Comments</b> :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		(R_FLAG:=FALSE) START T_AC_short, START T_AC_long			
2		REPEAT LTS_SABM_cmd UNTIL [R_FLAG]			1
3		PHL ! ph_data_req (R_FLAG:=FALSE)	Ph_data_req( TSC_EF_ADDR_CTRL, DI_ua_rsp(CR_0, TSC_V5DL_CTRL, F_1))		2
4		START T_START_UP			
5		REPEAT LTS_START_UP_POLL UNTIL [R_FLAG]			3
6		+LTS_CHECK_VERDICT			
		LTS_SABM_cmd			
7	TS0	PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T_AC_short, CANCEL T_AC_long	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))		
8	TS1	?TIMEOUT T_AC_long		INCONC	
9	TS2	?TIMEOUT T_AC_short			
10		PHL ! ph_data_req START T_AC_short	Ph_data_req( TSC_EF_ADDR_CTRL, DI_dm_rsp( CR_0, TSC_V5DL_CTRL, F_0))		
11	TS3	PHL ? OTHERWISE LTS_START_UP_POLL			
12	TS4	PHL ? ph_data_ind (V_R:=V_R+1, R_FLAG:=FALSE, R_VID := TRUE) CANCEL T_AC_long, START T_START_UP	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_req_vid))	(PASS)	a
13		+STEP_START_UP_VID			
14	TS6	PHL ? ph_data_ind (V_R:=V_R+1, R_FLAG:=FALSE, R_RESTART := TRUE) START T_START_UP	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_com_ctrl_restart_req))	(PASS)	c
15		+STEP_START_UP_RESTART			
16	TS7	PHL ? ph_data_ind (R_FLAG:=FALSE) START T_START_UP	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))		d

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Test Step Dynamic Behaviour					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
17	TS8	PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_ua_rsp(CR_0, TSC_V5DL_CTRL, F_1))		e
18		PHL ? ph_data_ind (R_FLAG:=FALSE)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		
19		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))		
20		PHL ? ph_data_ind	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))		
21	TS9	PHL ? ph_data_ind (V_R:=V_R+1, R_UNBLOCK:=TRUE)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_port_ctrl( TSC_NWK_CFE_UNBLOCK, TSPX_USERPORT_L3_AD DR_PSTN)))	(PASS)	b
22	TS10	PHL ! ph_data_req (V_S:=V_S+1)	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_port_ctrl_ack(TSC_NW K_CFE_UNBLOCK,TSPX_U SERPORT_L3_ADDR_PST N)))	(PASS)	b
23		PHL ? ph_data_ind (V_R:=V_R+1,R_UNBLOCK :=TRUE)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_port_ctrl( TSC_NWK_CFE_UNBLOCK, TSPX_USERPORT_L3_AD DR_ISDN)))		b
24		PHL ! ph_data_req (V_S:=V_S+1)	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_port_ctrl_ack(TSC_NW K_CFE_UNBLOCK,TSPX_U SERPORT_L3_ADDR_ISDN )))		b

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Test Step Dynamic Behaviour					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
25	TS12	?TIMEOUT T_START_UP (R_FLAG:=TRUE)			f
26	V1	LTS_CHECK_VERDICT [R_VID AND R_RESTART]		(PASS)	
27	V2	[TSPC_PSTN OR TSPC_ISDNBA]			
28	V3	[R_UNBLOCK]		(PASS)	
29	V4	[NOT R_UNBLOCK]		(FAIL)	
30	V5	[NOT(TSPC_PSTN OR TSPC_ISDNBA)]		R	
31	V6	[NOT (R_VID AND R_RESTART)]		(FAIL)	
<b>Detailed Comments :</b> 1) Receipt of a SABME frame (P=1) (SABME is polled by sending of DM response (P=0) messages. 2) Sending of an UA frame. 3) Polling of expected start-up procedures  LTS_START_UP_POLL a) Receipt of a COMMON CONTROL message (cf: variant & interface ID). The start of the variant & interface ID procedure. b) Unblocking of the user port(s). c) Receipt of a COMMON CONTROL message (cf: restart req). The restart procedure is initialized. d) Receipt of a SABME command. e) Receipt of a RR command. f) Expiry of T_VID_start_up (R_FLAG2 is set)					

Test Step Dynamic Behaviour					
<b>Test Step Name :</b> STEP_START_UP_ISDN_USER_PORT <b>Group :</b> state_transitions/V5_interface_startup/ <b>Objective :</b> Initialisation of the ISDN user port. New state 7.0 (AN2.2/LE2.2 ISDN user port FSM state). <b>Default :</b> DEF_ISDN_PRE <b>Comments :</b>					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		[TSPX_AN]			
2		+STEP_ISDN_USER_PORT_ACT_AN			2
3		[TSPX_LE]			
4		+STEP_ISDN_USER_PORT_ACT_LE			2
5		[(NOT TSPX_AN) AND (NOT TSPX_LE)]		INCONC	3
<b>Detailed Comments :</b> 1) Unblocking of an ISDN user port. 2) Activation of an ISDN user port. 3) The PIXITS TSPX_AN and TSPX_LE are incorrect, one of them has to be set and one not.					

### Test Step Dynamic Behaviour

**Test Step Name :** STEP\_DL\_CTRL\_ESTABLISH

**Group :** state\_transitions/V5\_interface\_startup/

**Objective :** Establishment of the Common Control DLL.

**Default :** DEF\_DLL\_PRE

**Comments :** ETS 300 324-1 [1], Subclauses: 10.4.11.2, table D-1.  
ETS 300 324-1 [1], AnnexM, fig. M.1.

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ! ph_data_req (V_S:=0, V_R:=0, V_A:=0, R_COUNTER:=0, R_FLAG:=FALSE) START T200_max	Ph_data_req(TSC_EF_ADD R_CTRL,DI_sabme_cmd(CR_1, TSC_V5DL_CTRL, P_1))		1
2		REPEAT LTS_UA_rsp UNTIL [R_FLAG] LTS_UA_rsp			2
3		PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max	Ph_data_ind(TSC_EF_ADD R_CTRL,DI_ua_rsp(CR_1, TSC_V5DL_CTRL, F_1))		
4		PHL ? ph_data_ind (R_FLAG:=FALSE)	Ph_data_ind(TSC_EF_ADD R_CTRL,DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))		
5		PHL ! ph_data_req	Ph_data_req(TSC_EF_ADD R_CTRL,DI_ua_rsp(CR_0, TSC_V5DL_CTRL, F_1))		
6		?TIMEOUT T200_max [R_COUNTER<=N200] (R_FLAG:=FALSE)			
7		PHL ! ph_data_req (R_COUNTER:=R_COUNTER+1) START T200_max	Ph_data_req(TSC_EF_ADD R_CTRL,DI_sabme_cmd(CR_1, TSC_V5DL_CTRL, P_1))		

**Detailed Comments :** 1) Sending of a SABME frame (P=1).

2) Receipt of an UA frame (a possible receipt of a SABME frame from the IUT is expected).

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STEP_DL_PSTN_ESTABLISH <b>Group</b> : state_transitions/V5_interface_startup/ <b>Objective</b> : Establishment of the PSTN DLL. <b>Default</b> : DEF_DLL_PRE <b>Comments</b> : ETS 300 324-1 [1], Subclauses: 10.4.11.2, table D-1. ETS 300 324-1 [1], AnnexM, fig. M.1.					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ! ph_data_req (V_S_PSTN:=0, V_R_PSTN:=0, V_A:=0, R_COUNTER:=0, R_FLAG:=FALSE) START T200_max	Ph_data_req( TSC_EF_ADDR_PSTN, DI_sabme_cmd(CR_1, TSC_V5DL_PSTN, P_1))		1
2		REPEAT LTS_UA_rsp UNTIL [R_FLAG]  LTS_UA_rsp			2
3		PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_PSTN, DI_ua_rsp(CR_1, TSC_V5DL_PSTN, F_1))		
4		PHL ? ph_data_ind (R_FLAG:=FALSE)	Ph_data_ind( TSC_EF_ADDR_PSTN, DI_sabme_cmd(CR_0, TSC_V5DL_PSTN, P_1))		
5		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_PSTN, DI_ua_rsp(CR_0, TSC_V5DL_PSTN, F_1))		
6		?TIMEOUT T200_max [R_COUNTER<=N200] (R_FLAG:=FALSE)			
7		PHL ! ph_data_req (R_COUNTER:=R_COUNTER+1) START T200_max	Ph_data_req( TSC_EF_ADDR_PSTN, DI_sabme_cmd(CR_1, TSC_V5DL_PSTN, P_1))		
<b>Detailed Comments</b> : 1) Sending of a SABME frame (P=1). 2) Receipt of an UA frame (a possible receipt of a SABME frame from the IUT is expected).					

### Test Step Dynamic Behaviour

**Test Step Name :** STEP\_ISDN\_USER\_PORT\_ACT\_AN

**Group :** state\_transitions/V5\_interface\_startup/

**Objective :** Activation of an ISDN user port. New state AN2.2.

**Default :** DEF\_ISDN\_PRE

**Comments :**

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_ISDN, DI_i_cmd( CR_1, TSC_V5DL_ISDN, V_S, P_1, V_R, Nwk_port_ctrl( TSC_NWK_CFE_FE101_AC T_ACC,TSPX_USERPORT_ L3_ADDR_ISDN)))		1
2		+STEP_RR_rsp(F_1)			
3		START T_AC_long			
4		PHL ? ph_data_ind(V_R:=V_R+1) CANCEL T_AC_long	Ph_data_ind( TSC_EF_ADDR_ISDN, DI_i_cmd( CR_0, TSC_V5DL_ISDN, V_R, P_0, V_S, Nwk_port_ctrl_ack( TSC_NWK_CFE_FE101_AC T_ACC,TSPX_USERPORT_ L3_ADDR_ISDN)))		2
5		PHL ! ph_data_req START T_AC_long	Ph_data_req( TSC_EF_ADDR_ISDN, DI_rr_rsp( CR_0, TSC_V5DL_ISDN, F_0, V_R))		
6		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_long	Ph_data_ind( TSC_EF_ADDR_ISDN, DI_i_cmd( CR_0, TSC_V5DL_ISDN, V_R, P_0, V_S, Nwk_port_ctrl( TSC_NWK_CFE_FE104_AC C_ACT,TSPX_USERPORT_ L3_ADDR_ISDN)))		3
7		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_ISDN, DI_i_cmd( CR_1, TSC_V5DL_ISDN, V_S, P_1, V_R, Nwk_port_ctrl_ack(TSC_NW K_CFE_FE104_ACC_ACT,T SPX_USERPORT_L3_ADD R_ISDN)))		4
8		+STEP_RR_rsp(F_1)			

**Detailed Comments :** 1) Sending of an I frame(port\_ctrl(FE101, activate access)).  
 2) Receipt of an I frame(port\_ctrl\_ack).  
 3) Receipt of an I frame(port\_ctrl(FE104, access activated)).  
 4) Sending of an I frame(port\_ctrl\_ack).

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STEP_ISDN_USER_PORT_ACT_LE <b>Group</b> : state_transitions/V5_interface_startup/ <b>Objective</b> : Activation of an ISDN user port. New state LE2.2. <b>Default</b> : DEF_ISDN_PRE <b>Comments</b> :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_ISDN, DI_i_cmd( CR_1, TSC_V5DL_ISDN, V_S, P_1, V_R, Nwk_port_ctrl( TSC_NWK_CFE_FE104_AC C_ACT,TSPX_USERPORT_ L3_ADDR_ISDN)))		1
2	LB1	+STEP_RR_rsp(F_1)			
3		START T_AC_long			
4	LB2	PHL ? ph_data_ind(V_R:=V_R+1) CANCEL T_AC_long	Ph_data_ind( TSC_EF_ADDR_ISDN, DI_i_cmd( CR_0, TSC_V5DL_ISDN, V_R, P_0, V_S, Nwk_port_ctrl_ack( TSC_NWK_CFE_FE104_AC C_ACT,TSPX_USERPORT_ L3_ADDR_ISDN)))		2
5		PHL ! ph_data_req START T_AC_long	Ph_data_req( TSC_EF_ADDR_ISDN, DI_rr_rsp( CR_0, TSC_V5DL_ISDN, F_0, V_R))		
6		+LTS_Activate_access			
7		GOTO LB2			
8		+LTS_Activate_access			
9		GOTO LB1			
		LTS_Activate_access			
10		PHL ? ph_data_ind (V_R:=V_R+1)	Ph_data_ind( TSC_EF_ADDR_ISDN, DI_i_cmd( CR_0, TSC_V5DL_ISDN, V_R, P_0, V_S, Nwk_port_ctrl( TSC_NWK_CFE_FE101_AC T_ACC,TSPX_USERPORT_ L3_ADDR_ISDN)))		3
11		PHL ! ph_data_req (V_S:=V_S+1)	Ph_data_req( TSC_EF_ADDR_ISDN, DI_i_cmd( CR_1, TSC_V5DL_ISDN, V_S, P_1, V_R, Nwk_port_ctrl_ack(TSC_NW K_CFE_FE101_ACT_ACC,T SPX_USERPORT_L3_ADD R_ISDN)))		

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Test Step Dynamic Behaviour
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<b>Detailed Comments :</b> 1) Sending of an I frame(port_ctrl(FE104, access activated)). 2) Receipt of an I frame(port_ctrl_ack). 3) In point to point LE may send an activate access when port has been unblocked
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Test Step Dynamic Behaviour					
<b>Test Step Name :</b> STEP_RESTART <b>Group :</b> state_transitions/V5_interface_startup/ <b>Objective :</b> Restart of the NWK entity in the IUT. All NWK settings are reinitialized. <b>Default :</b> DEF_DLL_PRE <b>Comments :</b>					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+LTS_RESTART_REQ			1
2		+LTS_RESTART_CPL			2
3		LTS_RESTART_REQ PHL ! ph_data_req (V_S:=V_S+1) START T200_max, START TR2_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_restart_req))		3
4		+STEP_RR_rsp(F_1)			4
5		START T_AC_short			
6		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_RESTART_ REQ)))		
7		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp(CR_0, TSC_V5DL_CTRL, F_0, V_R))		
8		LTS_RESTART_CPL PHL ? ph_data_ind (V_R:=V_R+1) CANCEL TR2_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_restart_cpl))		
9		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_RESTART_CPL)))		
10		+STEP_RR_rsp(F_0)			
<b>Detailed Comments :</b> 1) Initialization of the IUT Restart. 2) The IUT Restart was successful.  3-4) The I frame is sent with P=1, therefore a RR response(F=1) is expected in any case. Uncertainties if the I frame is answered by an I frame or a RR response are avoided.					

### Test Step Dynamic Behaviour

**Test Step Name :** STEP\_START\_UP\_RESTART

**Group :** state\_transitions/V5\_interface\_startup/

**Objective :** Restart procedure for the start-up.

**Default :** DEF\_DLL\_PRE

**Comments :**

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+LTS_RESTART_REQ			1
2		+LTS_RESTART_CPL			2
3		LTS_RESTART_REQ PHL ! ph_data_req (V_S:=V_S+1) START T200_max, START TR2_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_ack( TSC_NWK_CFI_RESTART_ REQ)))		3
4		+STEP_RR_rsp(F_1)			4
5		LTS_RESTART_CPL PHL ? ph_data_ind (V_R:=V_R+1) CANCEL TR2_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_restart_cpl))		
6		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_RESTART_CPL)))		3
7		+STEP_RR_rsp(F_1)			4
8		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_restart_cpl))		3
9		+STEP_RR_rsp(F_1)			4
10		PHL ? ph_data_ind (V_R:=V_R+1)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_RESTART_ CPL)))		

**Detailed Comments :** 1) Answering of the IUT Restart req.

2) Handling of the Restart cpl.

3-4) The I frame is sent with P=1, therefore a RR response(F=1) is expected in any case.

Uncertainties if the I frame is answered by an I frame or a RR response are avoided.

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STEP_START_UP_VID <b>Group</b> : state_transitions/V5_interface_startup/ <b>Objective</b> : Variant & interface ID procedure for the start-up. <b>Default</b> : DEF_DLL_PRE <b>Comments</b> :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req(TSC_EF_ADD R_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_REQ_VID)))		1
2		+STEP_RR_rsp(F_1)			
3		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_vid))		2
4		+STEP_RR_rsp(F_1)			
5		START T_AC_short			
6		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		3
7		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_0, V_R))		
<b>Detailed Comments</b> : 1) Sending of a COMMON CONTROL ACK (cfi: req variant & interface ID). 2) Sending of a COMMON CONTROL (cfi: variant & interface ID). 3) Receipt of a COMMON CONTROL ACK (cfi: variant & interface ID).					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STEP_LAPV5DL_51_9 <b>Group</b> : state_transitions/LAPV5_DL/ <b>Objective</b> : State transition from state 5.1 to state 9. <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 125 [8] , table D-1					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_dm_rsp( CR_0, TSC_V5DL_CTRL, F_1))		1
<b>Detailed Comments</b> : 1) Sending of a DM response (F=1), new state: 9.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STEP_LAPV5DL_70_51 <b>Group</b> : state_transitions/LAPV5_DL/ <b>Objective</b> : State transition from state 7.0 to state 5.1. <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 125 [8] , table D-2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ! ph_data_req START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_dm_rsp( CR_0, TSC_V5DL_CTRL, F_0))		1
2		PHL ? ph_data_ind (V_S := 0 , V_R := 0) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))		2
<b>Detailed Comments</b> : 1) Sending of a DM response (F=0). 2) Receipt of a SABME frame (P=1), new state: 5.1.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STEP_LAPV5DL_70_71 <b>Group</b> : state_transitions/LAPV5_DL/ <b>Objective</b> : State transition from state 7.0 to state 7.1. <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 125 [8] , table D-2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		(V_S:=V_S+1)			1
2		PHL ! ph_data_req (V_S:=V_S-1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_info))		2
3		PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rej_rsp( CR_1, TSC_V5DL_CTRL, F_0, V_S))		3
<b>Detailed Comments</b> : 1) Incrementing of V(S). 2) Sending of an I frame whose sequence number N(S) is not correct. 3) Receipt of a REJ response (F=0), new state: 7.1.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STEP_LAPV5DL_70_74 <b>Group</b> : state_transitions/LAPV5_DL/ <b>Objective</b> : State transition from state 7.0 to state 7.4. <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 125 [8] , table D-2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ! ph_data_req START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_cmd(CR_1, TSC_V5DL_CTRL, P_1, V_R))		1
2		+STEP_RR_rsp(F_1)			2
<b>Detailed Comments</b> : 1) Sending of a RNR command (P=1). 2) Receipt of a RR response (F=1), new state: 7.4.					

### Test Step Dynamic Behaviour

**Test Step Name** : STEP\_LAPV5DL\_70\_80

**Group** : state\_transitions/LAPV5\_DL/

**Objective** : State transition from state 7.0 to state 8.0.

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 125 [8] , table D-2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		START T203_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		1
2		PHL ? ph_data_ind CANCEL T203_max			

**Detailed Comments** : 1) On T203 expiry the IUT shall send a RR command (P=1), new state: 8.0.

### Test Step Dynamic Behaviour

**Test Step Name** : STEP\_LAPV5DL\_71\_75

**Group** : state\_transitions/LAPV5\_DL/

**Objective** : State transition from state 7.1 to state 7.5.

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 125 [8] , table D-2

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ! ph_data_req START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		1
2		+STEP_RR_rsp(F_1)			2

**Detailed Comments** : 1) Sending of a RNR command (P=1).  
2) Receipt of a RR response, new state: 7.5.

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STEP_LAPV5DL_80_81					
<b>Group</b> : state_transitions/LAPV5_DL/					
<b>Objective</b> : State transition from state 8.0 to state 8.1.					
<b>Default</b> : DEF_DLL_BODY					
<b>Comments</b> : Ref: ETS 300 125 [8] , table D-3					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	B1	(V_S:=V_S+1)	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_info))	(PASS)	1
2		PHL ! ph_data_req (V_S:=V_S-1,R_FLAG:=FALSE) START T200_max			2
3		REPEAT LTS_REJ_or_RR_or_I UNTIL [R_FLAG]			3
4		LTS_REJ_or_RR_or_I PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rej_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))		3.1
5		PHL ? ph_data_ind (R_FLAG:=FALSE)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		3.2
6		PHL ? ph_data_ind (R_FLAG:=FALSE, V_R:=BIT_TO_INT(dl_i_cmd.ctrl_field.n_s) +1)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, ?, P_1, V_S, Nwk_info_any))		3.3
<b>Detailed Comments</b> : 1) Incrementing of V(S). 2) Sending of an I frame whose sequence number N(S) is not correct. 3) Expected event, receipt of a REJ response, new state 8.1: 3.1) Receipt of REJ response (F=1) with N(R) equal V(S), requesting a re-transmission of the los I frame. 3.2) On T200 expiry in the IUT, the IUT retransmits a RR command (P=1). 3.3) On T200 expiry in the IUT, the IUT retransmits an I frame (P=1).					

### Test Step Dynamic Behaviour

**Test Step Name** : STEP\_LAPV5DL\_80\_84

**Group** : state\_transitions/LAPV5\_DL/

**Objective** : State transition from state 8.0 to state 8.4.

**Default** : DEF\_DLL\_BODY

**Comments** : Ref: ETS 300 125 [8] , table D-3

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ! ph_data_req (R_FLAG:=FALSE) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		1
2		REPEAT LTS_RR_rsp_or_cmd_or_I UNTIL [R_FLAG]  LTS_RR_rsp_or_cmd_or_I			2
3		PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))		2.1
4		PHL ? ph_data_ind (R_FLAG:=FALSE)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		2.2
5		PHL ? ph_data_ind (R_FLAG:=FALSE,V_R:=BIT_TO_INT(dl_i_cmd.ctrl _field.n_s) +1)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, ?, P_1, V_S, Nwk_info_any))		2.3

**Detailed Comments** :

- 1) Sending of a RNR command (P=1).
- 2) Expected event, receipt of a RR response, new state 8.4:
  - 2.1) Receipt of RR response (F=1) with N(R) equal V(S), requesting a re-transmission of the los I frame.
  - 2.2) On T200 expiry in the IUT, the IUT retransmits a RR command (P=1).
  - 2.3) On T200 expiry in the IUT, the IUT retransmits an I frame (P=1).



Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STEP_LAPV5DL_81_85 <b>Group</b> : state_transitions/LAPV5_DL/ <b>Objective</b> : State transition from state 8.1 to state 8.5. <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 125 [8] , table D-3					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ! ph_data_req (R_FLAG:=FALSE) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rnr_cmd( CR_1, TSC_V5DL_CTRL, P_1, V_R))		1
2		REPEAT LTS_RR_rsp_or_cmd_or_I UNTIL [R_FLAG]  LTS_RR_rsp_or_cmd_or_I			2
3		PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))		2.1
4		PHL ? ph_data_ind (R_FLAG:=FALSE)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))		2.2
5		PHL ? ph_data_ind (R_FLAG:=FALSE,V_R:=BIT_TO_INT(dl_i_cmd.ctrl _field.n_s) +1)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, ?, P_1, V_S, Nwk_info_any))		2.3
<b>Detailed Comments</b> : 1) Sending of a RNR command (P=1). 2) Expected event, receipt of a RR response, new state 8.5: 2.1) Receipt of RR response (F=1) with N(R) equal V(S), requesting a re-transmission of the lost I frame. 2.2) On T200 expiry in the IUT, the IUT re-sends a RR command (P=1). 2.3) On T200 expiry in the IUT, the IUT re-sends an I frame (P=1).					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STEP_LAPV5DL_9_50 <b>Group</b> : state_transitions/LAPV5_DL/ <b>Objective</b> : State transition from state 9 to state 5.0. <b>Default</b> : DEF_DLL_BODY <b>Comments</b> : Ref: ETS 300 125 [8] , table D-1					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ! ph_data_req START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_dm_rsp( CR_0, TSC_V5DL_CTRL, F_0))		1
2		PHL ? ph_data_ind (V_S:=0, V_R:=0, V_A:=0) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))		2
<b>Detailed Comments</b> : 1) Sending of a DM response (F=0). 2) Receipt of a SABME frame (P=1), new state: 5.0.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : Preamble_ISDN_state_4 <b>Group</b> : preamble/ <b>Objective</b> : Initialisation of the IUT for EF-ISDN tests. <b>Default</b> : DEF_ISDN_PRE <b>Comments</b> :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+STEP_START_UP_DL			1
2		+STEP_START_UP_ISDN_USER_PORT			2
<b>Detailed Comments</b> : 1) Initialisation of the IUT, the initial state is 7.0. 2) Initialisation of the ISDN user port.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : Preamble_state_50 <b>Group</b> : preamble/ <b>Objective</b> : Initialisation of the IUT for state 5.0 test cases. <b>Default</b> : DEF_DLL_PRE <b>Comments</b> : Ref: ETS 300 125 [8] , table D-1					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+STEP_START_UP_DL			1
2		+STEP_LAPV5DL_70_51			2
3		+STEP_LAPV5DL_51_9			3
4		+STEP_LAPV5DL_9_50			4
<b>Detailed Comments</b> : 1) Initialisation of the IUT, the initial state is 7.0. 2) State transition from state 7.0 to state 5.1. 3) State transition from state 5.1 to state 9. 4) State transition from state 9 to state 5.0.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : Preamble_state_51 <b>Group</b> : preamble/ <b>Objective</b> : Initialisation of the IUT for state 5.1 test cases. <b>Default</b> : DEF_DLL_PRE <b>Comments</b> : Ref: ETS 300 125 [8] , table D-1					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+STEP_START_UP_DL			1
2		+STEP_LAPV5DL_70_51			2
<b>Detailed Comments</b> : 1) Initialisation of the IUT, the initial state is 7.0. 2) State transition from state 7.0 to state 5.1.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : Preamble_state_70 <b>Group</b> : preamble/ <b>Objective</b> : Initialisation of the IUT for state 7.0 test cases. <b>Default</b> : DEF_DLL_PRE <b>Comments</b> : Ref: ETS 300 125 [8] , table D-2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+STEP_START_UP_DL			1
<b>Detailed Comments</b> : 1) Initialisation of the IUT, the initial state is 7.0.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : Preamble_state_71 <b>Group</b> : preamble/ <b>Objective</b> : Initialisation of the IUT for state 7.1 test cases. <b>Default</b> : DEF_DLL_PRE <b>Comments</b> : Ref: ETS 300 125 [8] , table D-2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+STEP_START_UP_DL			1
2		+STEP_LAPV5DL_70_71			2
<b>Detailed Comments</b> : 1) Initialisation of the IUT, the initial state is 7.0. 2) State transition from state 7.0 to state 7.1.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : Preamble_state_74 <b>Group</b> : preamble/ <b>Objective</b> : Initialisation of the IUT for state 7.4 test cases. <b>Default</b> : DEF_DLL_PRE <b>Comments</b> : Ref: ETS 300 125 [8] , table D-2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+STEP_START_UP_DL			1
2		+STEP_LAPV5DL_70_74			2
<b>Detailed Comments</b> : 1) Initialisation of the IUT, the initial state is 7.0. 2) State transition from state 7.0 to state 7.4.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : Preamble_state_75 <b>Group</b> : preamble/ <b>Objective</b> : Initialisation of the IUT for state 7.5 test cases. <b>Default</b> : DEF_DLL_PRE <b>Comments</b> : Ref: ETS 300 125 [8] , table D-2					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+STEP_START_UP_DL			1
2		+STEP_LAPV5DL_70_71			2
3		+STEP_LAPV5DL_71_75			3
<b>Detailed Comments</b> : 1) Initialisation of the IUT, the initial state is 7.0. 2) State transition from state 7.0 to state 7.1. 2) State transition from state 7.1 to state 7.5.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : Preamble_state_80 <b>Group</b> : preamble/ <b>Objective</b> : Initialisation of the IUT for state 8.0 test cases. <b>Default</b> : DEF_DLL_PRE <b>Comments</b> : Ref: ETS 300 125 [8] , table D-3					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+STEP_START_UP_DL			1
2		+STEP_LAPV5DL_70_80			2
<b>Detailed Comments</b> : 1) Initialisation of the IUT, the initial state is 7.0. 2) State transition from state 7.0 to state 8.0.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : Preamble_state_81 <b>Group</b> : preamble/ <b>Objective</b> : Initialisation of the IUT for state 8.1 test cases. <b>Default</b> : DEF_DLL_PRE <b>Comments</b> : Ref: ETS 300 125 [8] , table D-3					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+STEP_START_UP_DL			1
2		+STEP_LAPV5DL_70_80			2
3		+STEP_LAPV5DL_80_81			3
<b>Detailed Comments</b> : 1) Initialisation of the IUT, the initial state is 7.0. 2) State transition from state 7.0 to state 8.0. 3) State transition from state 8.0 to state 8.1.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : Preamble_state_84 <b>Group</b> : preamble/ <b>Objective</b> : Initialisation of the IUT for state 8.4 test cases. <b>Default</b> : DEF_DLL_PRE <b>Comments</b> : Ref: ETS 300 125 [8] , table D-3					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+STEP_START_UP_DL			1
2		+STEP_LAPV5DL_70_80			2
3		+STEP_LAPV5DL_80_84			3
<b>Detailed Comments</b> : 1) Initialisation of the IUT, the initial state is 7.0. 2) State transition from state 7.0 to state 8.0. 3) State transition from state 8.0 to state 8.4.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : Preamble_state_85 <b>Group</b> : preamble/ <b>Objective</b> : Initialisation of the IUT for state 8.5 test cases. <b>Default</b> : DEF_DLL_PRE <b>Comments</b> : Ref: ETS 300 125 [8] , table D-3					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+STEP_START_UP_DL			1
2		+STEP_LAPV5DL_70_80			2
3		+STEP_LAPV5DL_80_81			3
4		+STEP_LAPV5DL_81_85			4
<b>Detailed Comments</b> : 1) Initialisation of the IUT, the initial state is 7.0. 2) State transition from state 7.0 to state 8.0. 3) State transition from state 8.0 to state 8.1. 4) State transition from state 8.1 to state 8.5.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : Preamble_state_9 <b>Group</b> : preamble/ <b>Objective</b> : Initialisation of the IUT for state 9 test cases. <b>Default</b> : DEF_DLL_PRE <b>Comments</b> : Ref: ETS 300 125 [8] , table D-1					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		+STEP_START_UP_DL			1
2		+STEP_LAPV5DL_70_51			2
3		+STEP_LAPV5DL_51_9			3
<b>Detailed Comments</b> : 1) Initialisation of the IUT, the initial state is 7.0. 2) State transition from state 7.0 to state 5.1. 3) State transition from state 5.1 to state 9.					

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : Postamble_ISDN_DLL <b>Group</b> : postamble/ <b>Objective</b> : Reinitialisation of the IUT for the next test case if an ISDN port was activated. New state 7.0. <b>Default</b> : DEF_ISDN_POST <b>Comments</b> :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_ISDN, DI_i_cmd( CR_1, TSC_V5DL_ISDN, V_S, P_1, V_R, Nwk_port_ctrl( TSC_NWK_CFE_BLOCK,TS PX_USERPORT_L3_ADDR _ISDN)))		1
2		PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_ISDN, DI_rr_rsp( CR_1, TSC_V5DL_ISDN, F_1, V_S))		
3		START T_AC_long			
4		PHL ? ph_data_ind(V_R:=V_R+1) CANCEL T_AC_long	Ph_data_ind( TSC_EF_ADDR_ISDN, DI_i_cmd( CR_0, TSC_V5DL_ISDN, V_R, P_0, V_S, Nwk_port_ctrl_ack( TSC_NWK_CFE_BLOCK,TS PX_USERPORT_L3_ADDR _ISDN)))		2
5		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_ISDN, DI_rr_rsp( CR_0, TSC_V5DL_ISDN, F_0, V_R))		
6		+Postamble_DLL			3
<b>Detailed Comments</b> : 1) Sending of a Port ctrl (block) message to reinitialize the ISDN user port. 2) Receipt of a Port ctrl ack message, the unblocking procedure was successful. 3) Reinitialisation of the DLL entity for the next test case. New state 7.0.					

### Test Step Dynamic Behaviour

**Test Step Name** : Postamble\_DLL

**Group** : postamble/

**Objective** : Reinitialisation of the IUT for the next test case. New state 7.0.

**Default** : DEF\_DLL\_POST

**Comments** :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ! ph_data_req START T_AC_short	Ph_data_req( TSC_EF_ADDR_CTRL, DI_dm_rsp( CR_0, TSC_V5DL_CTRL, F_0))		1
2		PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))		2
3	PO1	PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_ua_rsp(CR_0, TSC_V5DL_CTRL, F_1))	R	3
<b>Detailed Comments</b> : 1) Sending of a DM response (F=0). 2) Receipt of a SABME frame (P=1), new state: 5.1. 3) Sending of a UA response (F=1), new state: 7.0.					



Test Step Dynamic Behaviour					
<b>Test Step Name</b> : Postamble_DLL_80					
<b>Group</b> : postamble/					
<b>Objective</b> : Reinitialisation of the IUT for the next test case from state 8.0. New state 7.0.					
<b>Default</b> : DEF_DLL_POST					
<b>Comments</b> :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	PO1	PHL ! ph_data_req START T_AC_short	Ph_data_req( TSC_EF_ADDR_CTRL, DI_dm_rsp( CR_0, TSC_V5DL_CTRL, F_0))	R	1
2		PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))		2
3		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_ua_rsp(CR_0, TSC_V5DL_CTRL, F_1))		3
4	PO2	PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))	R	4
5	PO3	PHL ! ph_data_req START T_AC_short	Ph_data_req( TSC_EF_ADDR_CTRL, DI_dm_rsp( CR_0, TSC_V5DL_CTRL, F_0))		1
6		PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))		2
7	PO3	PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_ua_rsp(CR_0, TSC_V5DL_CTRL, F_1))	R	3
<b>Detailed Comments</b> : 1) Sending of a DM response (F=0). 2) Receipt of a SABME frame (P=1), new state: 5.1. 3) Sending of a UA response (F=1), new state: 7.0. 4) Receipt of a RR command (P=1).					

### Test Step Dynamic Behaviour

**Test Step Name :** STEP\_CHECK\_STATE\_70

**Group :** status\_verification/

**Objective :** Check that the IUT is in state 7.0.

**Default :** DEF\_DLL\_BODY

**Comments :**

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	CS1	START T_NOAC		(PASS)	1
2		?TIMEOUT T_NOAC			
3		(V_S:=V_S+1)			
4	CS2	PHL ! ph_data_req (V_S:=V_S-1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1,TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_info))	(PASS)	3
5		PHL ? ph_data_ind CANCEL T200_max			

**Detailed Comments :** 1) No action shall appear, different to the states 7.4, 7.5 and 8.x.  
 2) Incrementing of V(S).  
 3) Sending of an I frame (P=1) whose sequence number N(S) is not correct.  
 4) Receipt of a REJ response (F=1), different to state 7.1.

### Test Step Dynamic Behaviour

**Test Step Name :** STEP\_CHECK\_STATE\_71

**Group :** status\_verification/

**Objective :** Check that the IUT is in state 7.0.

**Default :** DEF\_DLL\_BODY

**Comments :**

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	CS1	START T_NOAC		(PASS)	1
2		?TIMEOUT T_NOAC			
3		(V_S:=V_S+1)			
4	CS2	PHL ! ph_data_req (V_S:=V_S-1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_info))	(PASS)	3
5		PHL ? ph_data_ind CANCEL T200_max			

**Detailed Comments :** 1) No action shall appear, different to the states 7.4, 7.5 and 8.x.  
 2) Incrementing of V(S).  
 3) Sending of an I frame (P=1) whose sequence number N(S) is not correct.  
 4) Receipt of a RR response (F=1), different to state 7.1.

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STEP_CHECK_STATE_74 <b>Group</b> : status_verification/ <b>Objective</b> : Check that the IUT is in state 7.4. <b>Default</b> : DEF_DLL_BODY <b>Comments</b> :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		(R_COUNTER:=0) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_info))		1
2		+LTS_RR_command			2
3		(V_S:=V_S+1)			3
4		PHL ! ph_data_req (V_S:=V_S-1, R_FLAG:=FALSE) START T200_max			4
5		REPEAT LTS_REJ_rsp UNTIL [R_FLAG]			5
6		REPEAT LTS_RR_command UNTIL [R_COUNTER=N200]			
7	CS1	LTS_RR_command PHL ? ph_data_ind (R_COUNTER:= R_COUNTER+1) START T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))	(PASS)	
8		[R_COUNTER=N200]	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))		
9		PHL ! ph_data_req CANCEL T200_max			
10		[NOT (R_COUNTER=N200)]			
11	CS2	LTS_REJ_rsp PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rej_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	4.1
12	CS3	PHL ? ph_data_ind (R_FLAG:=FALSE, R_COUNTER:= R_COUNTER+1) START T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))	(PASS)	4.2
<b>Detailed Comments</b> : 1) On T200 expiry the IUT shall send a RR command (P=1), different to the states 7.0, 7.1 and 8.x. 2) Incrementing of V(S). 3) Sending of an I frame (P=1) whose sequence number N(S) is not correct (N(S) not equal V(R) of the IUT). 4) Receipt of a REJ response (F=1), different to state 7.5. 4.1) Receipt of a REJ response (F=1). 4.2) After the receipt of a RR command, R_COUNTER is incremented and T200_max is restarted. (it might be possible that a RR command (P=1) is received because of an other T200 expiry). 5) Check that the IUT repeats the RR command (P=1) N200 times.					

## Test Step Dynamic Behaviour

Test Step Name : STEP\_CHECK\_STATE\_75

Group : status\_verification/

Objective : Check that the IUT is in state 7.5.

Default : DEF\_DLL\_BODY

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		(R_COUNTER:=0) START T203_max			
2		+LTS_RR_command			1
3		(V_S:=V_S+1)			2
4		PHL ! ph_data_req START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_info))		3
5		(V_S:=V_S-1, R_FLAG:=FALSE)			4
6		REPEAT LTS_RR_rsp UNTIL [R_FLAG]			5
7		REPEAT LTS_RR_command UNTIL [R_COUNTER=N200]			6
8	CS1	LTS_RR_command PHL ? ph_data_ind (R_COUNTER:= R_COUNTER+1) START T203_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))	(PASS)	
9		[R_COUNTER=N200]			
10		PHL ! ph_data_req CANCEL T203_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_1, V_R))		
11		[NOT (R_COUNTER=N200)] LTS_RR_rsp			
12	CS2	PHL ? ph_data_ind (R_FLAG:=TRUE) CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))	(PASS)	5.1
13	CS3	PHL ? ph_data_ind (R_FLAG:=FALSE, R_COUNTER:= R_COUNTER+1) START T203_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_cmd( CR_0, TSC_V5DL_CTRL, P_1, V_S))	(PASS)	5.2

**Detailed Comments :** 1) On T203 expiry the IUT shall send a RR command (P=1), different to the states 7.0, 7.1 and 8.x.  
2) Incrementing of V(S) to simulate a lost I-frame.  
3) Sending of an I frame (P=1) whose sequence number N(S) is not correct (N(S) not equal V(R) of the IUT).  
4) Decrementing of V(S), V(S) is set back to the correct value,  
5) Receipt of a RR response (F=1), different to state 7.4.  
5.1) Receipt of a RR response (F=1).  
5.2) After the receipt of a RR command, R\_COUNTER is incremented and T200\_max is restarted (it might be possible that a RR command (P=1) is received because of an other T200 expiry).  
6) Check that the IUT repeats the RR command (P=1) N200 times.

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STEP_CHECK_I_frame_exchange <b>Group</b> : status_verification/ <b>Objective</b> : An I frame exchange shall be successful. The I frame exchange is based on the variant & interface ID procedure. <b>Default</b> : DEF_DLL_BODY <b>Comments</b> :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_req_vid))		
2		+STEP_RR_rsp(F_1)			
3		START T_AC_short			
4		PHL ? ph_data_ind(V_R:=V_R+1) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_REQ_VID)))		
5		PHL ! ph_data_req START T_AC_short	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_0, V_R))		
6		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_vid))		
7		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_com_ctrl_ack(TSC_NWK_CFI_VID)))		
8	CS1	PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, P_0, V_S))	(PASS)	
<b>Detailed Comments</b> : NOTE: To implement the test purpose the variant & interface ID NWK procedure was used. The NWK message sequence is as follows: --> Common control(Request for variant & interface ID) <-- Common control ack <-- Common control(variant & interface ID) --> Common control ack					

### Test Step Dynamic Behaviour

**Test Step Name** : STEP\_RR\_rsp(p\_f:B\_1)

**Group** : common\_test\_steps/

**Objective** : Receipt of a RR response and canceling of T200.

**Default** : DEF\_DLL\_BODY

**Comments** :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, p_f, V_S))		1

**Detailed Comments** : 1) Receipt of a RR response and canceling of T200.

### Test Step Dynamic Behaviour

**Test Step Name** : STEP\_nwk\_com\_ctrl\_req\_vid

**Group** : common\_test\_steps/

**Objective** : Sending of a Common ctrl message (request variant & interface ID) and receipt of a RR response.

**Default** : DEF\_DLL\_BODY

**Comments** :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_req_vid))		1
2		+STEP_RR_rsp(F_1)			2

**Detailed Comments** : 1) Sending of an I frame (P=1, Common ctrl(request variant & interface ID)).

2) Receipt of a RR response (F=1).

NOTE: The I frame is sent with P=1, therefore a RR response(F=1) is expected in any case.

Uncertainties if the I frame is answered by an I frame or a RR response are avoided.

Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STEP_nwk_cc_req_vid_cc_ack <b>Group</b> : common_test_steps/ <b>Objective</b> : Sending of a Common ctrl message (request variant & interface ID) and receipt of the RR response and the Common control ack. <b>Default</b> : DEF_DLL_BODY <b>Comments</b> :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_req_vid))		1
2		+STEP_RR_rsp(F_1)			2
3		START T_AC_short			
4		PHL ? ph_data_ind(V_R:=V_R+1) CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_REQ_VID)))		3
5		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_0, V_R))		
<b>Detailed Comments</b> : 1) Sending of an I frame (P=1, Common ctrl(request variant & interface ID)). 2) Receipt of a RR response (F=1). 3) Receipt of an I frame (P=0, Common control ack).  NOTE: The I frame is sent with P=1, therefore a RR response(F=1) is expected in any case. Uncertainties if the I frame is answered by an I frame or a RR response are avoided.					

### Test Step Dynamic Behaviour

**Test Step Name** : STEP\_nwk\_com\_ctrl\_vid\_iut

**Group** : common\_test\_steps/

**Objective** : Receipt of a Common ctrl message (Variant & interface ID) and sending of a Common ctrl ack message.

**Default** : DEF\_DLL\_BODY

**Comments** :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		START T_AC_long			
2		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_long	Ph_data_ind(TSC_EF_ADD R_CTRL,DI_i_cmd( CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_vid))		1
3		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req(TSC_EF_ADD R_CTRL,DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_0, V_R, Nwk_com_ctrl_ack(TSC_NW K_CFI_VID)))		2
4		+STEP_RR_rsp(F_0)			3

**Detailed Comments** : 1) Receipt of an I frame (P=0, Common ctrl (variant & interface ID)).  
 2) Sending of an I frame (P=0, Common ctrl ack).  
 3) Receipt of a RR response (F=0).

### Test Step Dynamic Behaviour

**Test Step Name** : STEP\_nwk\_com\_ctrl\_vid\_lt1

**Group** : common\_test\_steps/

**Objective** : Sending of a Common ctrl message (variant & interface ID) and receipt of a RR response.

**Default** : DEF\_DLL\_BODY

**Comments** :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_vid))		1
2		+STEP_RR_rsp(F_1)			2

**Detailed Comments** : 1) Sending of an I frame (P=1, Common ctrl(variant & interface ID)).  
 2) Receipt of a RR response (F=1).  
 NOTE: The I frame is sent with P=1, therefore a RR response(F=1) is expected in any case.  
 Uncertainties if the I frame is answered by an I frame or a RR response are avoided.



Test Step Dynamic Behaviour					
<b>Test Step Name</b> : STEP_nwk_cc_vid_iut_proc <b>Group</b> : common_test_steps/ <b>Objective</b> : variant & interface ID procedure initiated by the IUT. <b>Default</b> : DEF_DLL_BODY <b>Comments</b> :					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1		START T_AC_long			
2		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_long	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_req_vid))		
3		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_ack(TSC_NWK_CFI_REQ_VID)))		
4		+STEP_RR_rsp(F_1)			
5		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd( CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_com_ctrl_vid))		
6		+STEP_RR_rsp(F_1)			
7		PHL ? ph_data_ind(V_R:=V_R+1) CANCEL T_AC_long	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_com_ctrl_ack( TSC_NWK_CFI_VID)))		
8		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_0, TSC_V5DL_CTRL, F_0, V_R))		
<b>Detailed Comments</b> : The NWK message sequence is as follows: IUT --> Common control(Request for variant & interface ID) <-- Common control ack <-- Common control(variant & interface ID) --> Common control ack					

## Default Dynamic Behaviour

Default Name : DEF\_ISDN\_PRE

Group :

Objective : Covers the default handling concerning the ISDN-DL in the preamble.  
NOTE: USE AS PREAMBLE DEFAULT ONLY !

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	DPR1	PHL ? OTHERWISE		(INCONC)	1
2		+LTS_DEFAULT_BEHAVIOUR			
3	DPR2	?TIMEOUT		(INCONC)	2
4		+LTS_DEFAULT_BEHAVIOUR			
5		LTS_DEFAULT_BEHAVIOUR PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_ISDN, DI_i_cmd( CR_1, TSC_V5DL_ISDN, V_S, P_1, V_R, Nwk_port_ctrl( TSC_NWK_CFE_BLOCK,TS PX_USERPORT_L3_ADDR _ISDN)))		a
6		PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_ISDN, DI_rr_rsp( CR_1, TSC_V5DL_ISDN, F_1, V_S))		
7		START T_AC_long			
8		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_long	Ph_data_ind( TSC_EF_ADDR_ISDN, DI_i_cmd( CR_0, TSC_V5DL_ISDN, V_R, P_0, V_S, Nwk_port_ctrl_ack( TSC_NWK_CFE_BLOCK,TS PX_USERPORT_L3_ADDR _ISDN)))		
9		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_ISDN, DI_rr_rsp( CR_0, TSC_V5DL_ISDN, F_0, V_R))		
10		PHL ! ph_data_req START T_AC_short	Ph_data_req( TSC_EF_ADDR_CTRL, DI_dm_rsp( CR_0, TSC_V5DL_CTRL, F_0))		b
11		PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))		c
12	DPR4	PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_ua_rsp(CR_0, TSC_V5DL_CTRL, F_1))	R	d
13	DPR5	?TIMEOUT T_AC_short		F	

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Default Dynamic Behaviour					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
14	DPR6	PHL ? OTHERWISE		F	
15	DPR7	?TIMEOUT T_AC_long		F	
16	DPR8	PHL ? OTHERWISE		F	
17	DPR9	?TIMEOUT T200_max			
18	DPR10	PHL ? OTHERWISE		F	
<div>Detailed Comments : 1) An unexpected event appeared. 2) Unexpected expiry of a timer.</div> <div>LTS_DEFAULT_BEHAVIOUR: a) Sending of a Port ctrl (block) message to reinitialize the ISDN user port. b) Sending of a DM response (F=0). c) Receipt of a SABME frame (P=1), new state: 5.1. d) Sending of a UA response (F=1), new state: 7.0.</div>					

## Default Dynamic Behaviour

Default Name : DEF\_ISDN\_BODY

Group :

Objective : Covers the default handling concerning the ISDN-DL in the test body.  
NOTE: USE AS TEST BODY DEFAULT ONLY !

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	DB1	PHL ? OTHERWISE		(FAIL)	1
2	DB2	?TIMEOUT		(FAIL)	2
3		+LTS_DEFAULT_BEHAVIOUR			
		LTS_DEFAULT_BEHAVIOUR			
4		PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_ISDN, DI_i_cmd( CR_1, TSC_V5DL_ISDN, V_S, P_1, V_R, Nwk_port_ctrl( TSC_NWK_CFE_BLOCK,TS PX_USERPORT_L3_ADDR _ISDN)))		a
5		PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_ISDN, DI_rr_rsp( CR_1, TSC_V5DL_ISDN, F_1, V_S))		
6		START T_AC_long			
7		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_long	Ph_data_ind( TSC_EF_ADDR_ISDN, DI_i_cmd( CR_0, TSC_V5DL_ISDN, V_R, P_0, V_S, Nwk_port_ctrl_ack( TSC_NWK_CFE_BLOCK,TS PX_USERPORT_L3_ADDR _ISDN)))		
8		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_ISDN, DI_rr_rsp( CR_0, TSC_V5DL_ISDN, F_0, V_R))		
9		PHL ! ph_data_req START T_AC_short	Ph_data_req( TSC_EF_ADDR_CTRL, DI_dm_rsp( CR_0, TSC_V5DL_CTRL, F_0))		b
10		PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))		c
11	DB4	PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_ua_rsp(CR_0, TSC_V5DL_CTRL, F_1))	R	d
12	DB5	?TIMEOUT T_AC_short		F	
13	DB6	PHL ? OTHERWISE		F	

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Default Dynamic Behaviour					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
14	DB7	?TIMEOUT T_AC_long		F	
15	DB8	PHL ? OTHERWISE		F	
16	DB9	?TIMEOUT T200_max			
17	DB10	PHL ? OTHERWISE		F	
<p><b>Detailed Comments :</b> 1) An unexpected event appeared. 2) Unexpected expiry of a timer.</p> <p>LTS_DEFAULT_BEHAVIOUR:</p> <p>a) Sending of a Port ctrl (block) message to reinitialize the ISDN user port. b) Sending of a DM response (F=0). c) Receipt of a SABME frame (P=1), new state: 5.1. d) Sending of a UA response (F=1), new state: 7.0.</p>					

## Default Dynamic Behaviour

Default Name : DEF\_ISDN\_POST

Group :

Objective : Covers the default handling concerning the ISDN-DL in the postamble.  
NOTE: USE AS POSTAMBLE DEFAULT ONLY !

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	DPO1	PHL ? OTHERWISE		(FAIL)	1
2		+LTS_DEFAULT_BEHAVIOUR			
3	DPO2	?TIMEOUT		(FAIL)	2
4		+LTS_DEFAULT_BEHAVIOUR			
5		LTS_DEFAULT_BEHAVIOUR PHL ! ph_data_req (V_S:=V_S+1) START T200_max	Ph_data_req( TSC_EF_ADDR_ISDN, DI_i_cmd( CR_1, TSC_V5DL_ISDN, V_S, P_1, V_R, Nwk_port_ctrl( TSC_NWK_CFE_BLOCK,TS PX_USERPORT_L3_ADDR _ISDN)))		a
6		PHL ? ph_data_ind CANCEL T200_max	Ph_data_ind( TSC_EF_ADDR_ISDN, DI_rr_rsp( CR_1, TSC_V5DL_ISDN, F_1, V_S))		
7		START T_AC_long			
8		PHL ? ph_data_ind (V_R:=V_R+1) CANCEL T_AC_long	Ph_data_ind( TSC_EF_ADDR_ISDN, DI_i_cmd( CR_0, TSC_V5DL_ISDN, V_R, P_0, V_S, Nwk_port_ctrl_ack( TSC_NWK_CFE_BLOCK,TS PX_USERPORT_L3_ADDR _ISDN)))		
9		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_ISDN, DI_rr_rsp( CR_0, TSC_V5DL_ISDN, F_0, V_R))		
10		PHL ! ph_data_req START T_AC_short	Ph_data_req( TSC_EF_ADDR_CTRL, DI_dm_rsp( CR_0, TSC_V5DL_CTRL, F_0))		b
11		PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))		c
12	DPO4	PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_ua_rsp(CR_0, TSC_V5DL_CTRL, F_1))	R	d
13	DPO5	?TIMEOUT T_AC_short		F	

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Default Dynamic Behaviour					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
14	DPO6	PHL ? OTHERWISE		F	
15	DPO7	?TIMEOUT T_AC_long		F	
16	DPO8	PHL ? OTHERWISE		F	
17	DPO9	?TIMEOUT T200_max			
18	DPO10	PHL ? OTHERWISE		F	
<div>Detailed Comments : 1) An unexpected event appeared. 2) Unexpected expiry of a timer.</div> <div>LTS_DEFAULT_BEHAVIOUR: a) Sending of a Port ctrl (block) message to reinitialize the ISDN user port. b) Sending of a DM response (F=0). c) Receipt of a SABME frame (P=1), new state: 5.1. d) Sending of a UA response (F=1), new state: 7.0.</div>					

## Default Dynamic Behaviour

Default Name : DEF\_DLL\_PRE

Group :

Objective : Covers the default handling concerning the DLL in the preamble.  
NOTE: USE AS PREAMBLE DEFAULT ONLY !

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	DP_R 1	PHL ? ph_data_ind	Ph_data_ind( TSC_EF_ADDR_PSTN, DI_sabme_cmd(CR_0, TSC_V5DL_PSTN, P_1))		
2		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_PSTN, DI_ua_rsp(CR_0, TSC_V5DL_PSTN, F_1))		
3		RETURN			
4	DP_R 2	PHL ? ph_data_ind	Ph_data_ind( TSC_EF_ADDR_PSTN, DI_rr_cmd( CR_0, TSC_V5DL_PSTN, P_1, V_S_PSTN))		
5		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_PSTN, DI_rr_rsp( CR_0, TSC_V5DL_PSTN, F_1, V_R_PSTN))		
6		RETURN			
7	DP_R 3	PHL ? ph_data_ind	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_rr_rsp( CR_1, TSC_V5DL_CTRL, F_1, V_S))		
8		RETURN			
9	DP_R 4	PHL ? ph_data_ind (V_R:=V_R+1)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_port_ctrl( TSC_NWK_CFE_UNBLOCK, TSPX_USERPORT_L3_AD DR_PSTN)))		
10		PHL ! ph_data_req (V_S:=V_S+1)	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_port_ctrl_ack(TSC_NW K_CFE_UNBLOCK,TSPX_U SERPORT_L3_ADDR_PST N)))		
11		RETURN			

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Default Dynamic Behaviour					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
12	DPR_5	PHL ? ph_data_ind (V_R:=V_R+1)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, V_R, P_0, V_S, Nwk_port_ctrl( TSC_NWK_CFE_UNBLOCK, TSPX_USERPORT_L3_AD DR_ISDN)))		
13		PHL ! ph_data_req (V_S:=V_S+1)	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_port_ctrl_ack(TSC_NW K_CFE_UNBLOCK,TSPX_U SERPORT_L3_ADDR_ISDN )))		
14		RETURN			
15	DPR1	PHL ? OTHERWISE		(INCONC)	1
16		+LTS_DEFAULT_BEHAVIOUR			
17	DPR2	?TIMEOUT		(INCONC)	2
18		+LTS_DEFAULT_BEHAVIOUR			
19		LTS_DEFAULT_BEHAVIOUR PHL ! ph_data_req START T_AC_short	Ph_data_req( TSC_EF_ADDR_CTRL, DI_dm_rsp( CR_0, TSC_V5DL_CTRL, F_0))		a
20		PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))		b
21	DPR6	PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_ua_rsp(CR_0, TSC_V5DL_CTRL, F_1))	R	c
22	DPR7	?TIMEOUT T_AC_short		F	
23	DPR8	PHL ? OTHERWISE		F	
<p><b>Detailed Comments :</b> 1) An unexpected event appeared. 2) Unexpected expiry of a timer.</p> <p>LTS_DEFAULT_BEHAVIOUR: a) Sending of a DM response (F=0). b) Receipt of a SABME frame (P=1), new state: 5.1. c) Sending of a UA response (F=1), new state: 7.0.</p>					

## Default Dynamic Behaviour

Default Name : DEF\_DLL\_BODY

Group :

Objective : Covers the default handling concerning the DLL in the test body.  
NOTE: USE AS TEST BODY DEFAULT ONLY !

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	DB_R 1	PHL ? ph_data_ind	Ph_data_ind( TSC_EF_ADDR_PSTN, DI_sabme_cmd(CR_0, TSC_V5DL_PSTN, P_1))		
2		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_PSTN, DI_ua_rsp(CR_0, TSC_V5DL_PSTN, F_1))		
3		RETURN			
4	DB_R 2	PHL ? ph_data_ind	Ph_data_ind( TSC_EF_ADDR_PSTN, DI_rr_cmd( CR_0, TSC_V5DL_PSTN, P_1, V_S_PSTN))		
5		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_PSTN, DI_rr_rsp( CR_0, TSC_V5DL_PSTN, F_1, V_R_PSTN))		
6		RETURN			
7	DBR_ 3	PHL ? ph_data_ind (V_R:=BIT_TO_INT(dl_i_cmd.ctrl_field.n_s) +1)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, ?, P_0, V_S, Nwk_port_ctrl( TSC_NWK_CFE_UNBLOCK, TSPX_USERPORT_L3_AD DR_PSTN)))		
8		PHL ! ph_data_req (V_S:=V_S+1)	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_port_ctrl_ack(TSC_NW K_CFE_UNBLOCK,TSPX_U SERPORT_L3_ADDR_PST N)))		
9		RETURN			
10	DBR_ 4	PHL ? ph_data_ind (V_R:=BIT_TO_INT(dl_i_cmd.ctrl_field.n_s) +1)	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_0, TSC_V5DL_CTRL, ?, P_0, V_S, Nwk_port_ctrl( TSC_NWK_CFE_UNBLOCK, TSPX_USERPORT_L3_AD DR_ISDN)))		

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Default Dynamic Behaviour					
Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
11		PHL ! ph_data_req (V_S:=V_S+1)	Ph_data_req( TSC_EF_ADDR_CTRL, DI_i_cmd(CR_1, TSC_V5DL_CTRL, V_S, P_1, V_R, Nwk_port_ctrl_ack(TSC_NW K_CFE_UNBLOCK,TSPX_U SERPORT_L3_ADDR_ISDN )))		
12		RETURN			
13	DB1	PHL ? OTHERWISE		(FAIL)	1
14		+LTS_DEFAULT_BEHAVIOUR			
15	DB2	?TIMEOUT		(FAIL)	2
16		+LTS_DEFAULT_BEHAVIOUR			
		LTS_DEFAULT_BEHAVIOUR			
17		PHL ! ph_data_req START T_AC_short	Ph_data_req( TSC_EF_ADDR_CTRL, DI_dm_rsp( CR_0, TSC_V5DL_CTRL, F_0))		a
18		PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))		b
19	DB6	PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_ua_rsp(CR_0, TSC_V5DL_CTRL, F_1))	R	c
20	DB7	?TIMEOUT T_AC_short		F	
21	DB8	PHL ? OTHERWISE		F	
<p><b>Detailed Comments :</b> 1) An unexpected event appeared. 2) Unexpected expiry of a timer.</p> <p>LTS_DEFAULT_BEHAVIOUR: a) Sending of a DM response (F=0). b) Receipt of a SABME frame (P=1), new state: 5.1. c) Sending of a UA response (F=1), new state: 7.0.</p>					

## Default Dynamic Behaviour

Default Name : DEF\_DLL\_POST

Group :

Objective : Covers the default handling concerning the DLL in the postamble.  
NOTE: USE AS POSTAMBLE DEFAULT ONLY !

Comments :

Nr	Label	Behaviour Description	Constraints Ref	Verdict	Comments
1	DP_R 1	PHL ? ph_data_ind	Ph_data_ind( TSC_EF_ADDR_PSTN, DI_sabme_cmd(CR_0, TSC_V5DL_PSTN, P_1))		b
2		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_PSTN, DI_ua_rsp(CR_0, TSC_V5DL_PSTN, F_1))		
3		RETURN			
4	DP_R 2	PHL ? ph_data_ind (R_FLAG:=FALSE)	Ph_data_ind( TSC_EF_ADDR_PSTN, DI_rr_cmd( CR_0, TSC_V5DL_PSTN, P_1, V_S_PSTN))		e
5		PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_PSTN, DI_rr_rsp( CR_0, TSC_V5DL_PSTN, F_1, V_R_PSTN))		
6		RETURN			
7	DPO1	PHL ? OTHERWISE		(FAIL)	1
8		+LTS_DEFAULT_BEHAVIOUR			
9	DPO2	?TIMEOUT		(FAIL)	2
10		+LTS_DEFAULT_BEHAVIOUR			
		LTS_DEFAULT_BEHAVIOUR			
11		PHL ! ph_data_req START T_AC_short	Ph_data_req( TSC_EF_ADDR_CTRL, DI_dm_rsp( CR_0, TSC_V5DL_CTRL, F_0))		a
12		PHL ? ph_data_ind CANCEL T_AC_short	Ph_data_ind( TSC_EF_ADDR_CTRL, DI_sabme_cmd(CR_0, TSC_V5DL_CTRL, P_1))		b
13	DPO6	PHL ! ph_data_req	Ph_data_req( TSC_EF_ADDR_CTRL, DI_ua_rsp(CR_0, TSC_V5DL_CTRL, F_1))	R	c
14	DPO7	?TIMEOUT T_AC_short		F	
15	DPO8	PHL ? OTHERWISE		F	

Detailed Comments : 1) An unexpected event appeared.  
2) Unexpected expiry of a timer.

LTS\_DEFAULT\_BEHAVIOUR:

- a) Sending of a DM response (F=0).
- b) Receipt of a SABME frame (P=1), new state: 5.1.
- c) Sending of a UA response (F=1), new state: 7.0.